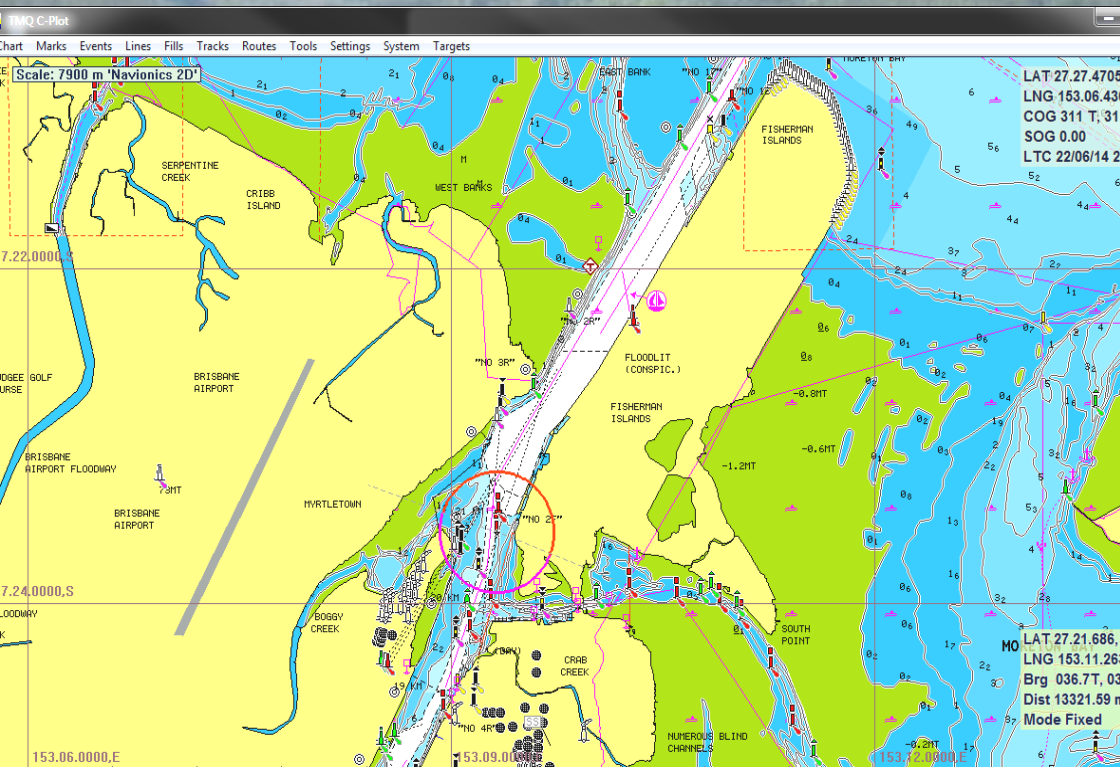




# C-Plot™

## Chart Plotting Software



## Users Guide

**C-Plot Supports Navionics Charts and Jeppesen MAX Pro Charts.  
C-Plot also supports HCRF, BSB and LINZ**



---

# WARNING

**THIS DEVICE IS ONLY AN AID TO NAVIGATION. ITS ACCURACY CAN BE AFFECTED BY MANY FACTORS SUCH AS EQUIPMENT FAILURE OR DEFECTS, ENVIRONMENTAL CONDITIONS AND INCORRECT USE.**

**IT IS THE RESPONSIBILITY OF THE USER TO USE COMMON SENSE AND NAVIGATION JUDGEMENT. THIS DEVICE SHOULD NOT BE RELIED ON AS A SUBSTITUTE FOR SUCH COMMON SENSE AND JUDGEMENT.**

**CHARTS DISPLAYED USING C-PLOT ARE FOR REFERENCE ONLY AND ARE NOT INTENDED TO REPLACE PAPER CHARTS. OFFICIAL PAPER CHARTS ARE THE MOST RELIABLE SOURCE OF NAVIGATIONAL INFORMATION.**

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# 1.0 Overview of C-Plot

## *1.1 What is C-Plot ?*

C-Plot for Windows is a computerised chart display plotting system, designed and manufactured by TMQ International, Australia. C-Plot software enables you to view C-Map, Navionics, BSB, ARCS / Seafarer/ LINZ HCRF Raster chart format 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.

## *1.2 Security Key Identification (Dongles)*

### **TMQ I-Key**



The TMQ security key is required for C-Plot Max Pro.

### **TMQ HASP**



The HASP security key is required for any Nav, SF or Pro system and also to view and install the Navionics, Seafarer or ARCS or LINZ charts.

---

## 1.3 Hardware Requirements

C-Plot Nav+ operates using Microsoft Windows Vista™ or Microsoft Windows 7™ or Microsoft Windows 8™ on IBM™ or compatible Personal Computers (PCs).

C-Plot Maxpro operates using Microsoft Windows XP™ or Microsoft Windows Vista™ or Microsoft Windows 7™ on IBM™ or compatible Personal Computers (PCs).

The Minimum system requirements for C-Plot Max are:

- CPU: Intel™ Processor, 1.8GHz or higher
- RAM: 1 gb (minimum)
- Mouse or Trackball pointing device.
- SVGA Monitor (1024 x 768 screen resolution, minimum)
- Graphics accelerator video card
- At least 1 serial communications port
- USB Ports (require sufficient for security keys and mouse and keyboard)
- HDD: 40Gb with at least 10gb of free space dedicated to C-Plot. (Dependant on the Number of Charts Installed)
- DVD Drive (optional but

- ② *You should leave sufficient disc space for the electronic chart database (C-map, HCRF 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 can use and store.*
- ② *The TMQ Security Key must be plugged in at all times while using C-Plot.*

## 2.0 C-Plot 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.

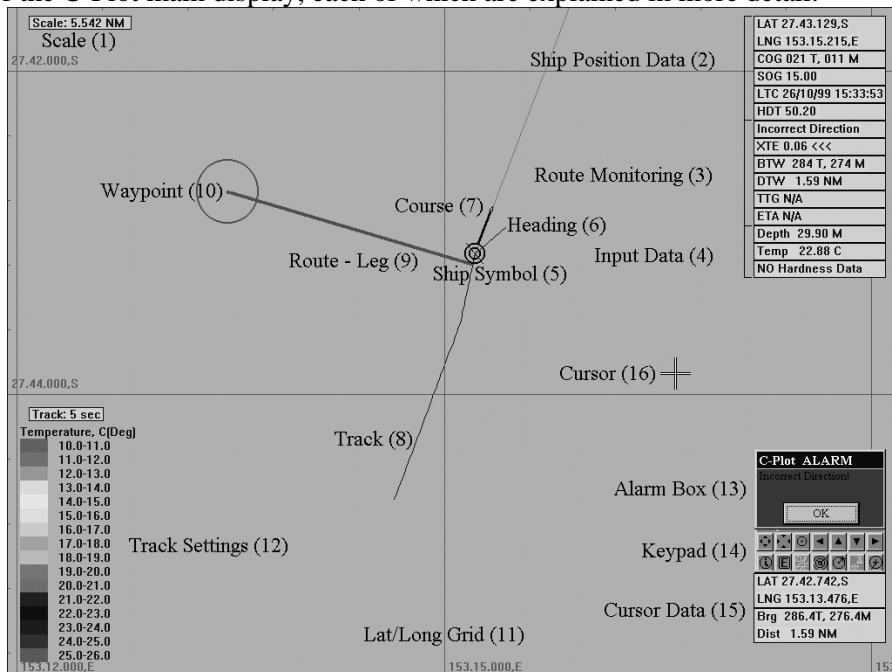


Figure 2.1

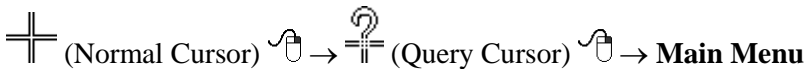
1. **Scale** – Vertical measurement of the window in which the chart is being displayed.
2. **Ship Position Data** – Information relating to the current position of the vessel. If these data fields appear RED this indicates that GPS input has been lost and C-Plot is now in 'Dead Reckoning' Mode (See 12.0 Dead Reckoning Mode). If these data fields appear in Degrees, Decimal degrees, ie. 27.23232S you have enabled Decimal Degrees mode. Alt 'D' changes this mode.
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, when viewing on a small scale the vessels trace size can be displayed.
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. The colour of the cursor data is an indication of the status of the auto centre function. If these data fields appear in Degrees, Decimal degrees, ie. 27.23232S you have enabled Decimal Degrees mode. Alt 'D' changes this mode.
  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**.




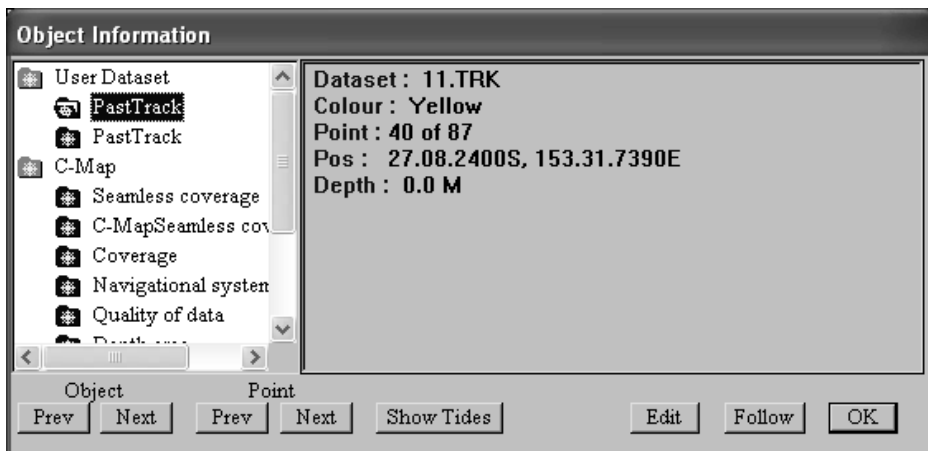
**Figure 2.2**

---

## 2.1.2 The Object Information Function

The object information Cursor is the heart of editing and controlling data on the chart window. You can view information relating to objects clicked on and, if they are objects you have added, you can modify these to your own requirements.

The cursor  (symbol) when clicked over the object in question, the object information box will be shown.



The edit function allows you to edit the properties of a user added feature.

You can edit Marks, Events, Lines, Fills and Tracks.

The Follow button allows you to use the segments of the track for autopilot steering.

The 'Show Tides' button invokes the Tide Table dialogue box. More information can be found on this utility in the C-Plot Installation Guide.

## 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.
	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.
	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.



---

## 2.1.4 C-Plot Vessel follow modes

	Vessel Tracking	Cursor Mode	Target Tracking.
General	Vessel will stay on screen in area bounded by either centre vessel mode or watch ahead mode.	Click on location to centre screen.	Target will stay on screen in area bounded by either centre target mode or watch ahead mode.
If Vessel is off the screen	N/A	Stay on clicked centre.	Stay on Target
If the vessel goes off Screen	N/A	Selectable action by Auto tracking Configuration	No Action
If Vessel is off the screen and comes back onto the screen	N/A	Selectable action by Auto tracking Configuration	No Action
If Vessel comes onto the screen and then moves off the screen.	N/A	Selectable action by Auto tracking Configuration	No Action
If the Vessel comes onto the screen while tracking a Target and then goes off the screen	n/A	N/A	No Action
If screen is clicked onto location near the vessel	<i>Stay following vessel</i>	<i>Start Following Vessel</i>	<i>Start Following Vessel</i>



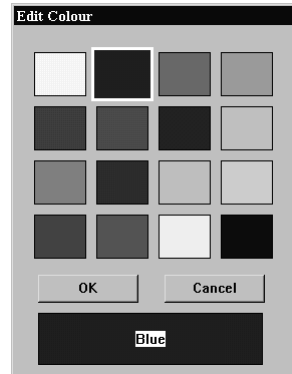
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## 2.2 *Selecting Colours and Symbols*

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

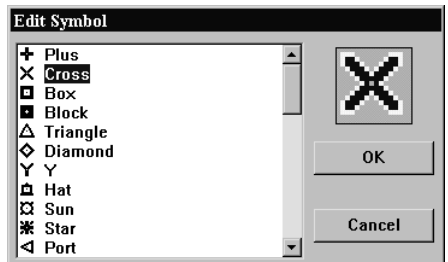
### 2.2.1 Selecting a Colour

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.



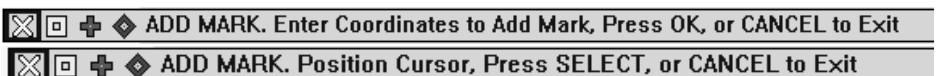
### 2.2.2 Selecting a Symbol

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.



### 2.2.3 Selecting a Symbol in Mark Add mode

You can change the symbol type by clicking on the desired symbol with the mouse. The Selected mark will then be added when the mark is added. The defaults for these marks can be changed in





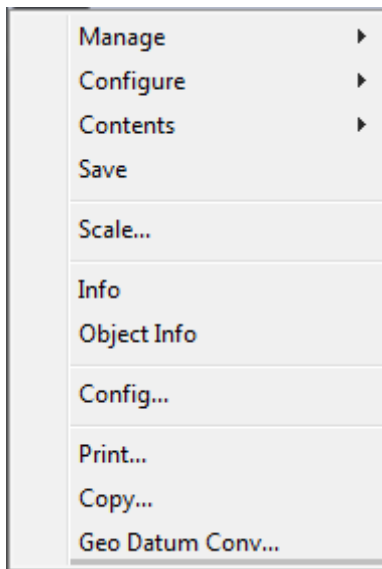
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## 3.0 Charts

C-Plot is able to display Navionics, C-Map, HCRF and TMQ Charts as the main chart. The **Chart** menu facilitates access to all C-Plot functions pertaining to charts.

Before the charts can be loaded they must be installed on the hard drive of the computer.

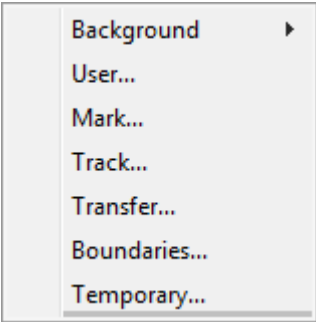
See the C-Plot Installation Guide for the procedure required to install the HCRF (ARCS or Seafarer) and/or C-MAP Max Pro.



**Charts cannot be loaded until the Databases are configured and the Charts Installed.**

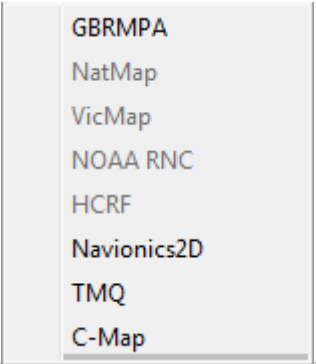
### 3.1 The ‘Chart - Manage’ Function

This function enables Charts to be loaded and viewed for display.



#### 3.1.1 Managing Background Charts

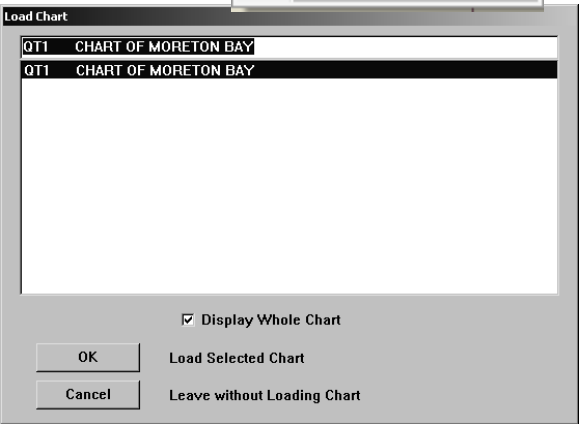
The background chart is defined as your navigation Chart. You may have a choice of navigation charts that you can use with TMQ C-plot. This screen will show your currently enabled background chart choices. This screen is configurable from the Chart, Configuration Page.



##### 3.1.1.1 Managing TMQ Charts

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

The ‘Load Chart’ dialogue-box that is 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, clicking on ‘Cancel’ will return to the main chart display without loading the selected chart.

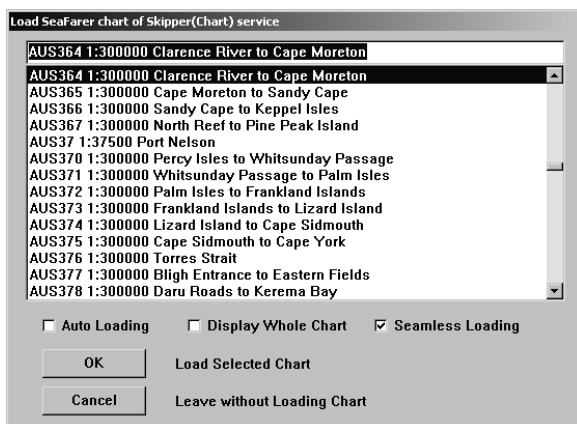


### 3.1.1.2 Managing HCRF Charts

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

The 'Load Chart' dialogue-box 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'.



### 3.1.1.3 Managing Navionics Charts

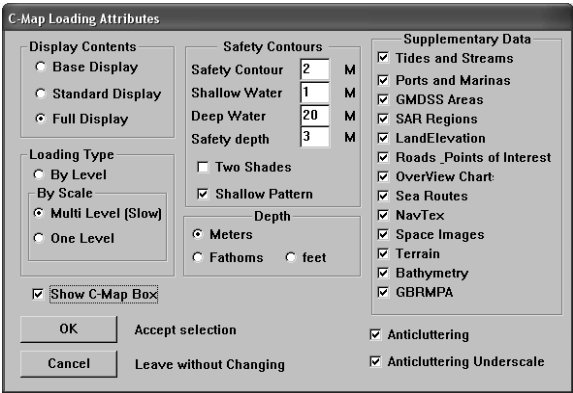
This function will load Navionics charts if the Navionics Chart card has been added to the system.



### 3.1.1.4 Managing C-Map Charts

This function will load C-Map Max Pro charts if they have been installed on the system.

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.

### 3.1.1.5 Other Background Chart Sets.

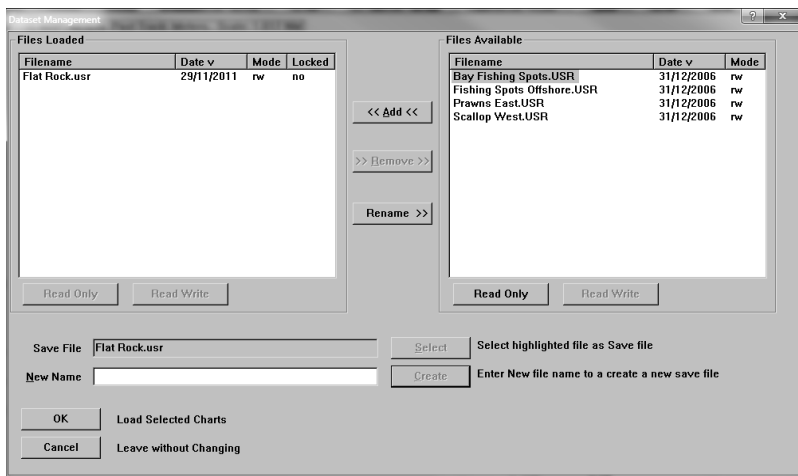
Other Background chart sets can be listed in this window if enabled in the Chart configuration Window.

---

### 3.1.2 Managing User Charts

User charts contain additional objects that a user has placed on the main chart, such as Areas, Lines, Marks and Events. You can manage charts and select which files you wish to load. These files are then sequentially loaded and you can view and identify the data from each file. When you remove this file, it is removed from the chart view. You need to select a file where new data will be saved to; this file is known as the active save file. All new user data will be saved to this file. You can change or create a new active save file at any time.

To use,  
select the  
file or files  
you wish to  
view from  
the files  
available on  
the left hand  
side. If you  
have no files  
available  
this list will  
be empty.



Click on the add button to add the highlighted files to the Files loaded Column. Remove is the opposite procedure.

To select a save file, select a file from the File Loaded List and press the select button. All new data will be saved to this file.

You can also create a new file for saving new data to. Enter the New Name of the file and click on the create button. This file is then automatically selected as the save file.

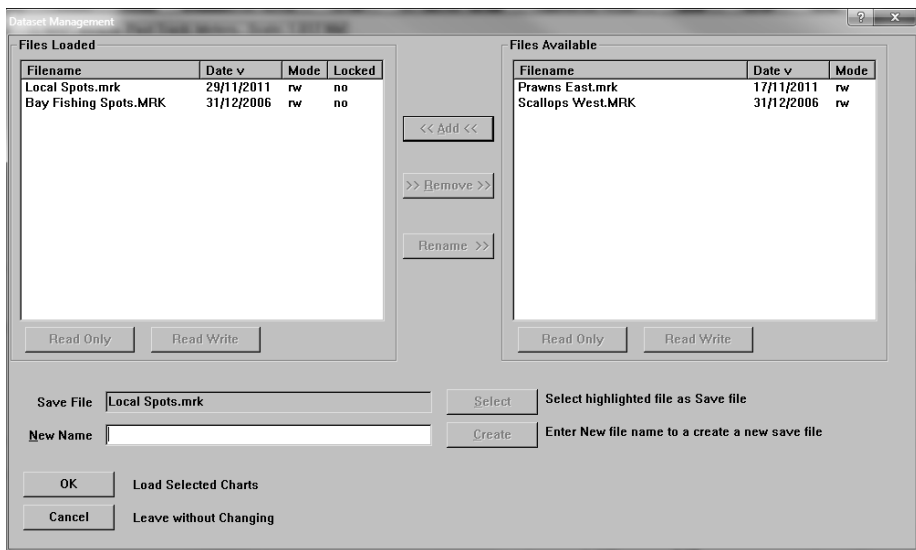
Your User Chart files can be protected against changes by setting the mode to read-only (RO). The mode for each file is listed in the **Mode** column. To change the mode from its current setting, select the files you wish to change and click the required mode change button under the file list, **Read Only** or **Read Write**.

NB. The Active Save File cannot be set to Read Only.

---

### 3.1.3 Managing Marks Charts

Marks Charts contain only Marks and Events that have been placed on the main chart by the user. You can manage charts and select which files you wish to load. These files are then sequentially loaded and you can view and identify the data from each file. When you remove this file, it is removed from the chart view. You need to select a file where new data will be saved to, this file is known as the active save file. All new mark and event data will be saved to this file. You can change or create a new active save file at any time.



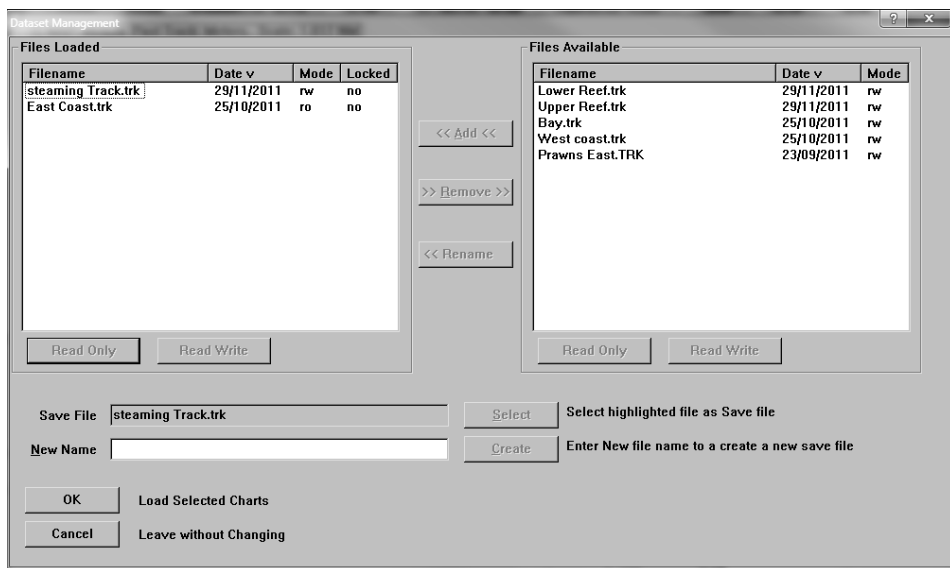
To use, select the file or files you wish to view from the files available on the left hand side. If you have no files available this list will be empty. Click on the add button to add the highlighted files to the Files loaded Column. Remove is the opposite procedure.

To select a save file, select a file from the File Loaded List and press the select button. All new data will be saved to this file.

You can also create a new file for saving new data to. Enter the New Name of the file and click on the create button. This file is then automatically selected as the save file.



## 3.1.4 Managing Track Charts



You can manage tracks and select which files you wish to load. These files are then sequentially loaded and you can view and identify the data from each file. When you remove this file, it is removed from the chart view. You need to select a file where new data will be saved to, this file is known as the active save file. All new track data will be saved to this file. You can change or create a new active save file at any time.

To use, select the file or files you wish to view from the files available on the left hand side. If you have no files available this list will be Track charts contain one or more past tracks of the vessel. Previously saved track charts can be viewed using empty. Click on the add button to add the highlighted files to the Files loaded Column. Remove is the opposite procedure.

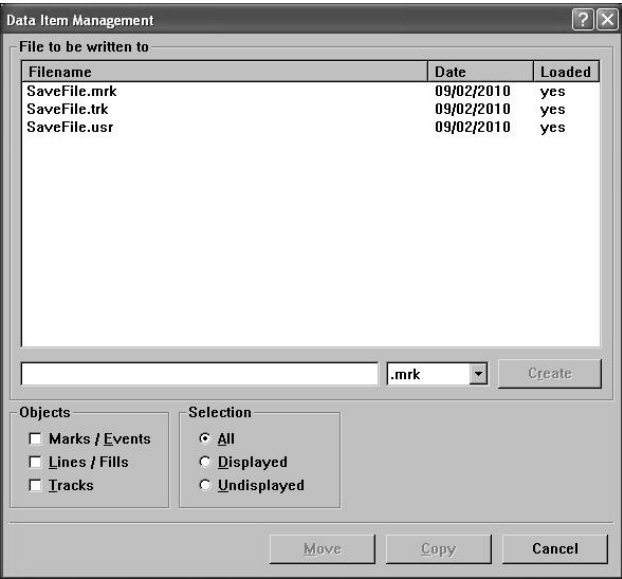
To select a save file, select a file from the File Loaded List and press the select button. All new data will be saved to this file.

You can also create a new file for saving new data to. Enter the New Name of the file and click on the create button. This file is then automatically selected as the save file.

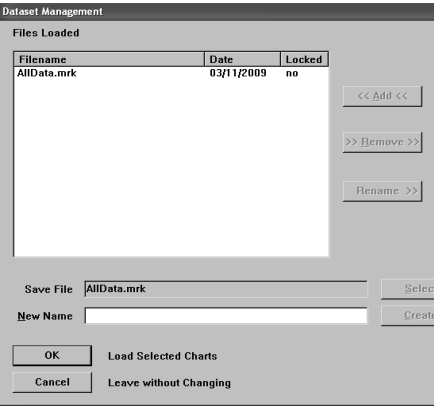
### 3.1.5 Transfer Data

The C-plot program allows you to modify and move data from file to file.

This is a powerful feature best described in the following examples.



#### 3.1.5.1 Creating the Test Datasets

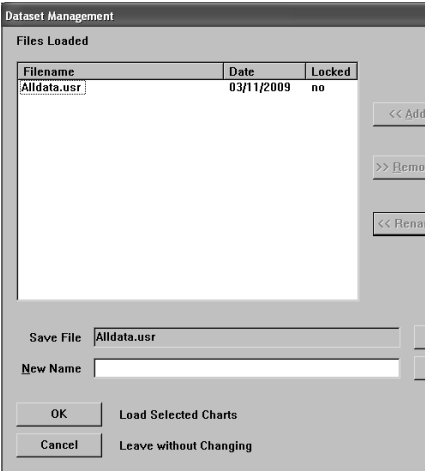


Create a new Mark Save file called AllData.mrk.

Remove all Other Mark Save Files.

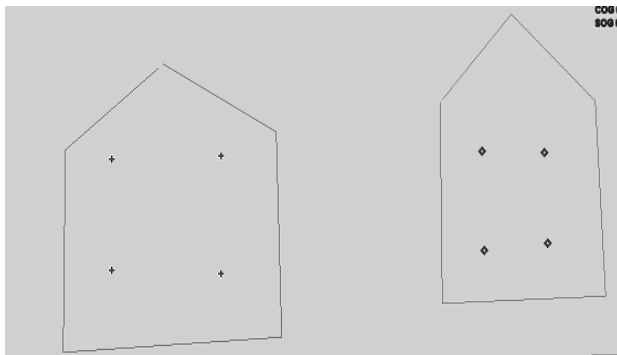
Create a new user save file called Alldata

Remove all other user Datasets.



By this stage you should understand that all new data added to the C-plot system will go into the current Active Save File. All new marks and events will go into the Alldata.mrk. And all new lines and fills will go into the alldata.usr

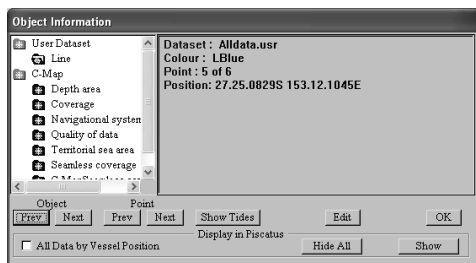
In a **Blank** Area on your chart. Create the Below objects.



To get the colours right, Select object information and edit to change the colours.

Right clicking once and Bringing up Object information on a Line will show.

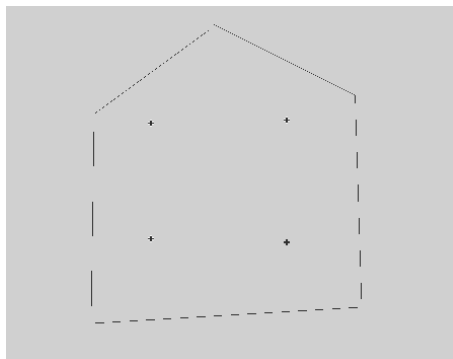
This line is stored in Alldata.usr and it has 6 points.



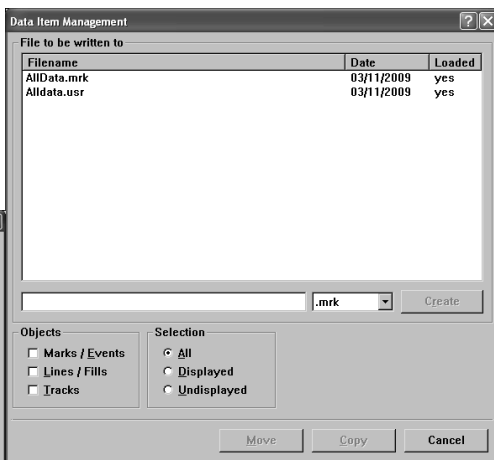
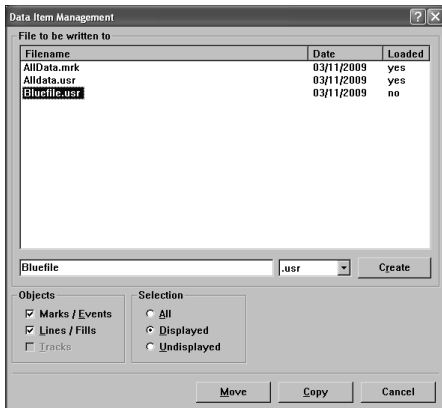
### 3.1.5.2 Saving/Moving the Data to another file

Now, Zoom in on the Blue data so that it is on the screen.

Bring up Chart, manage, Transfer.



The system shown only has 2 files for this example. You may have more files.



Create a new file Called Bluefile.usr and select Create.

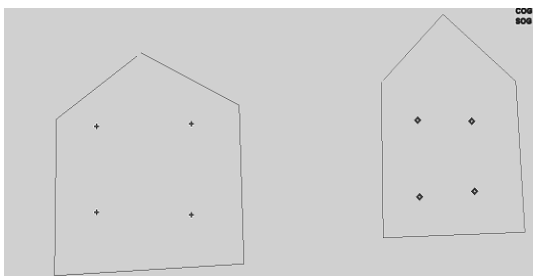
This will create a new blank file at this stage.

The selection we want is the displayed area.

And since User files can contain marks and lines we will accept this.

Click on Move, and this all Displayed data on the screen will be moved to this file. The Data will be removed from the original file with the move command.

**MOVE has taken the data from both types. Mark and user. For the marks and lines. And put them into the user file.**



---

### 3.1.5.3 Saving/Moving specific objects to another file

Next. Zoom in on the Red Parts.

Create a new mark file called RedMarks

We can move all the marks on the displayed screen to this file.

So, this will move all the red marks on the screen to the Redmarks.mrk file.

These marks will be removed from the AllData.mrk file.

**The move command moves data from multiple loaded files and put the data into the selected file. It will remove the data from the original File.**

*Note: If you move data to a file that contains data, the move command will move the data from other files and add it to the select file.*

### 3.1.5.4 Identifying the files

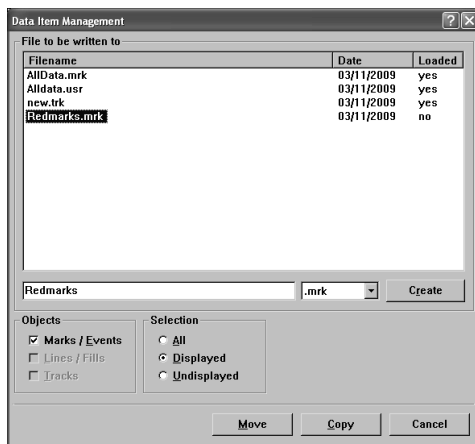
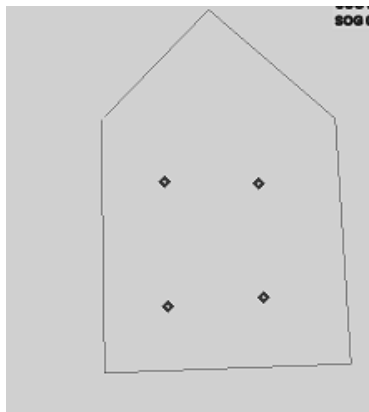
What files do we have?

AllData.mrk empty, But all new marks and events will go to this screen.

AllData.usr Still contains that Red line and any new lines will go to this file.

Bluefile.usr contains the Blue lines and marks.

Redmarks.mrk contains the Red Marks



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### 3.1.5.5 Copying Data

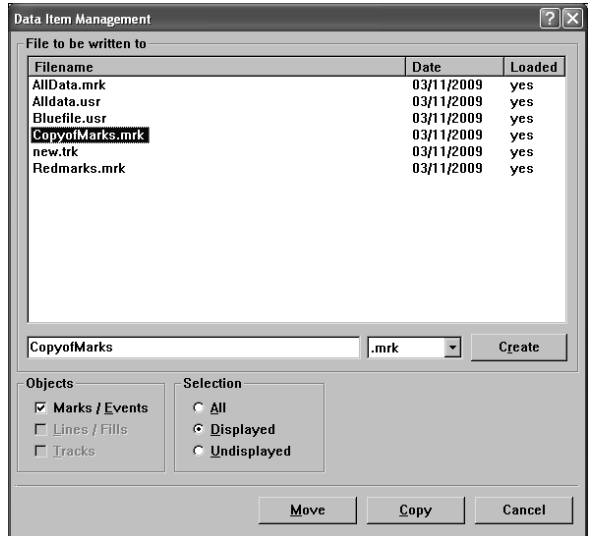
By now, you should understand that Move removes the data from loaded files and puts them into the new file.

**The copy takes the data. And puts it into the Selected file, It does not remove the data from the original files.**

Create a new mark file called Copyofmarks

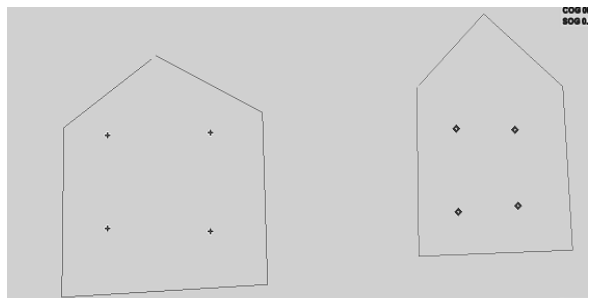
Select Displayed Area and then hit copy.

This will make a copy of the Displayed marks and make a copy in this new file.



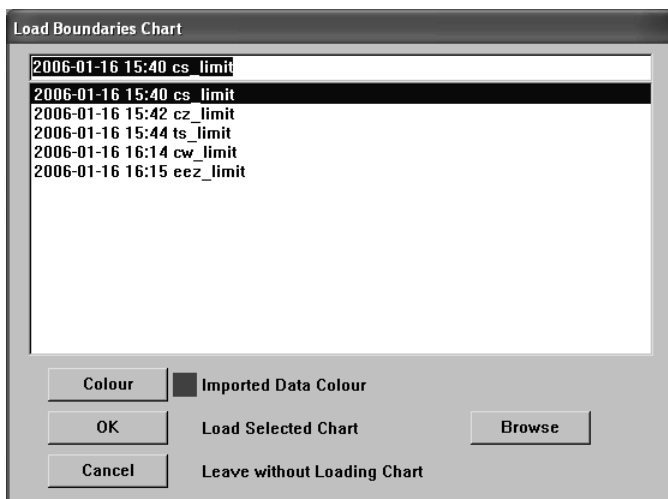
Query the marks on the screen. It will show you, that the marks now appear twice on the system.

ie: there will be 2 marks for every click on the query button, But these 2 marks will be in 2 different files.



### 3.1.6 Managing Boundary Charts

Boundary Charts allow you to load up any imported data from the Mapinfo™ MID & MIF™ file format. This Boundary data is overlayed onto your Navigational Screen to allow you to view the contents of this data.



Boundaries can be downloaded from various sources.

Example EEZ  
Boundary  
Around  
Christmas Island



### 3.1.7 Managing Temporary Charts

The Temporary chart function will load data from other file formats, these charts will disappear when the C-plot system is restarted.

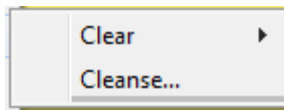
---

## 3.2 The ‘Chart – Configure’ Funtion

The Chart Configure function will allow you to configure charts quickly for the current loaded chart.

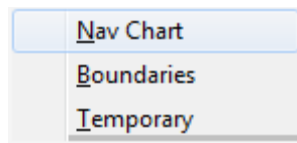
## 3.3 The ‘Chart – Contents’ Funtion

The Chart Save function will save any files that have been modified and have been unsaved



### 3.3.1 The ‘Chart- Contents - Clear’ Function

The Chart Clear function allows you to remove either the NavChart or the Boundary chart from the C-Plot system. Clearing the NavChart will cause the current Background Chart to be unloaded. Clearing the Boundaries will delete all of the lines stored in the boundaries database. To restore, they will have to be re-imported.



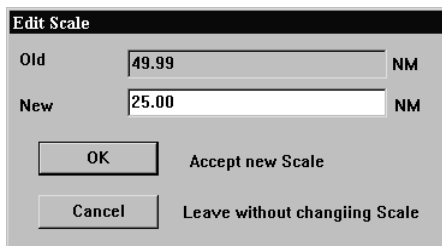
### 3.3.2 The ‘Chart-Contents-Cleanse’ Function

The Chart Cleanse function allows you to remove Duplicate data from within files loaded on the C-plot system.

## 3.4 The ‘Chart – Save’ Function

The Chart Save function will save any files that have been modified and have been unsaved since the AutoSave Function.

## 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.

.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.



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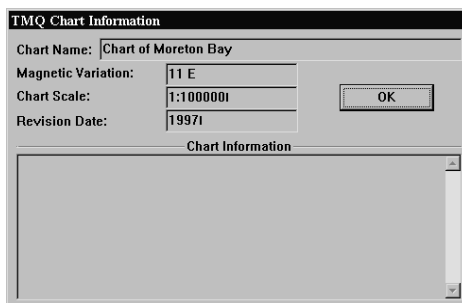
Click 'OK' to accept the new scale or 'Cancel' to return to the main chart display without changing the scale.

### 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.

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



### 3.7 The 'Chart - Object Info' Function

The **Object Info** function allows information on marks or events to be displayed.

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:

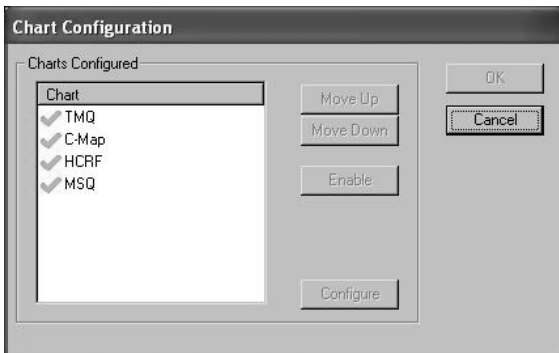


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## 3.8 The ‘Chart - Config’ Function

The Config function facilitates modifying the database of the background chart, Navionics, C-MAP or HCRF Charts or MSQ. You can also enable or Disable available charts.

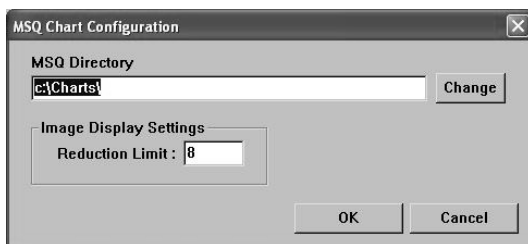
The Chart configuration of Max pro or Seafarer is Available in the Maxpro chart manager installation guide, or the HCRF installation guide.



### 3.8.1 The ‘Chart – Config- MSQ’

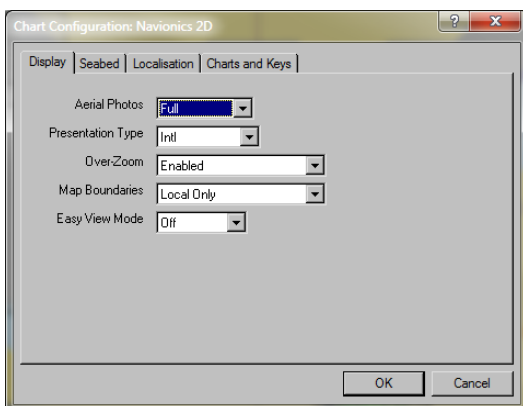
C-plot can now display digital charts from Maritime Safety Queensland. Specify the directory where the chart files are.

The reduction limit is the displayed limit of the file. At large zoom scales. The limit is the multiple where the chart can be displayed. Ie, up to 8 times the zoom.



### 3.8.2 The ‘Chart – Config- Navionics

Please plug in the Navionics Chart Card to the computer. If you have a Micro SD Card slot, place card into this, otherwise use the usb adaptor supplied in the Navionics packaging and plug this into the USB slot.

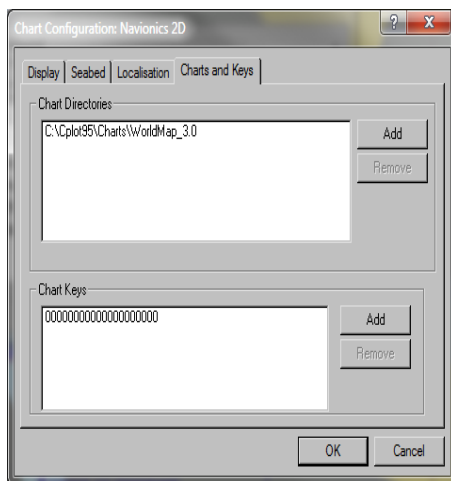


To configure the Navionics Chart, Please Select configure and a new window will appear, Select the Charts and Keys Tab on the Top Right. The World background is default and is supplied with the C-plot installation.

Press the Add Button, and navigate to the Charts folder on the Navionics Chart Card.

Add any extra chart cards using this method.


Then select OK to accept this setting. Return to C-Plot window by clicking the OK button, and your high detail chart should appear.

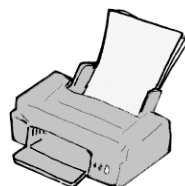


C-plot will need to be connected to the Internet to register any new charts to use on the C-plot system before they will display.

### 3.9 The 'Chart - Print' Function

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

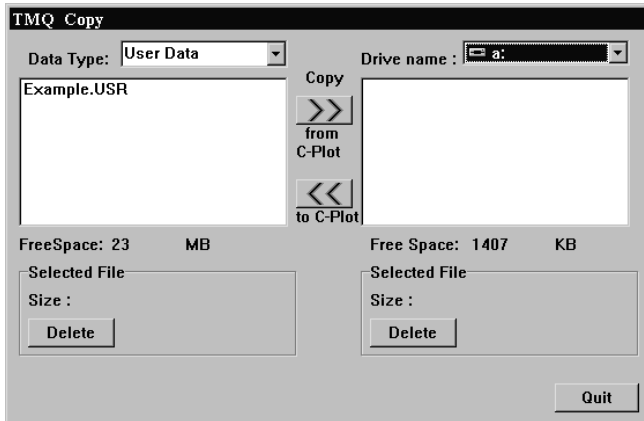
 *The print job is sent to the default printer. If your default printer is not ready, or not set up correctly, the print function will fail. Consult Windows help if printing problems occur.*



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### 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.



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:

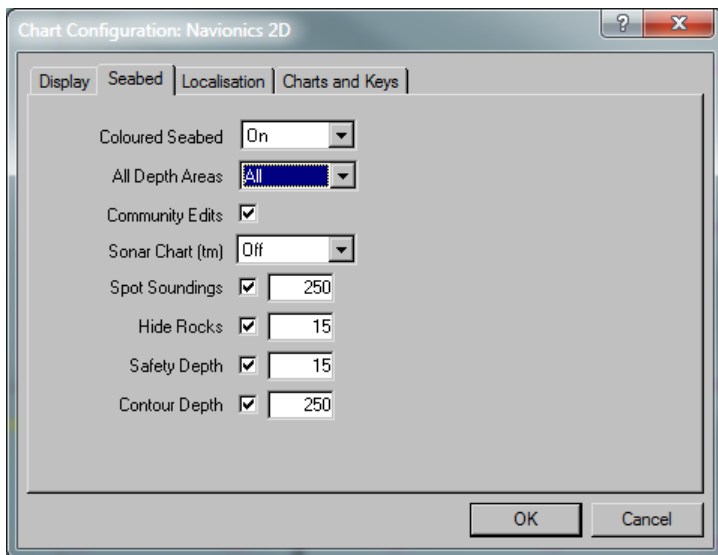
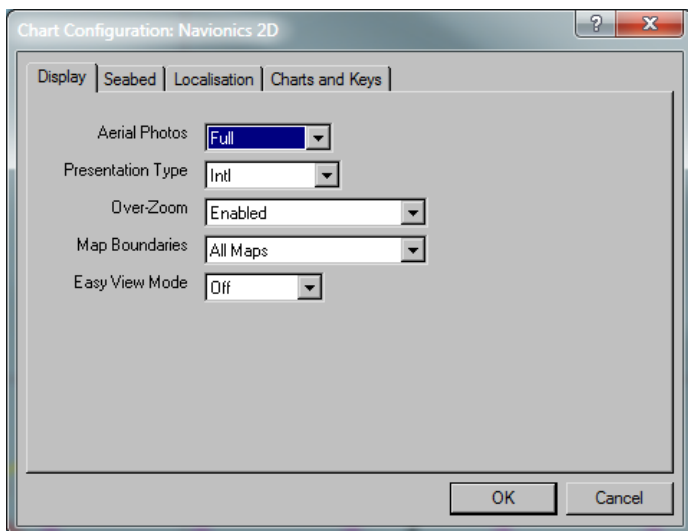
1. Select the desired 'Data Type'
2. Select the desired Source drive (Drive Name)
3. Select the file to be restored from the right-hand list
4. Click the 'Copy to C-Plot' button (<<)
5. Repeat steps 3 & 4 until all desired files of this data type are restored
6. Repeat Steps 1-5 until all desired file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

---

### 3.11 Navionics Charts(*C-plot Nav+Only*)

Navionics charts are the base Navigation Layer for TMQ C-Plot Nav Software. Changing the view properties of the Charts is done under the configuration page for Navionics.

Sonar Charts are only Available with



Navionics Nav+ Chart Card.

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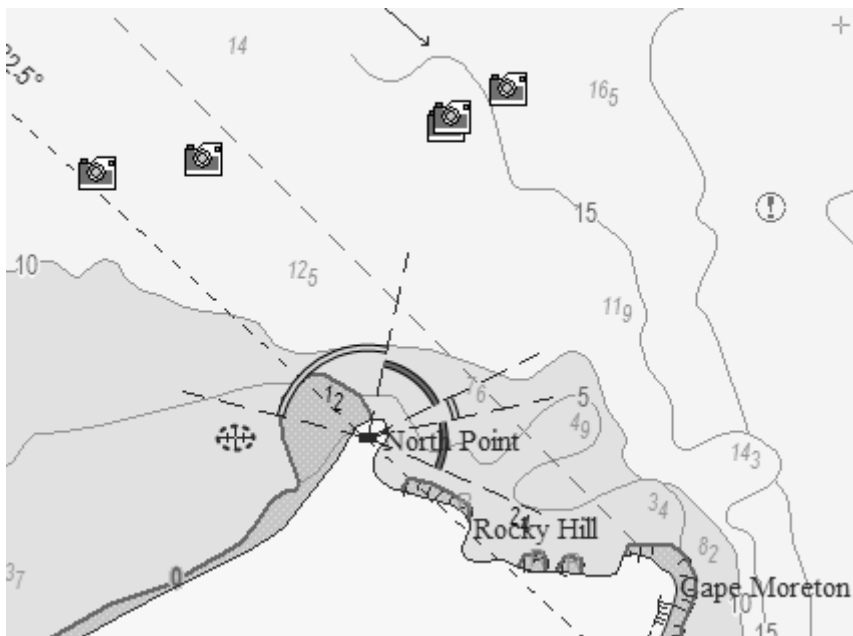
## 3.12 Jeppesen MaxPro Charts (C-plot Max Pro Only)


Jeppesen Maxpro charts are the base Navigation Layer for TMQ C-Plot Max Pro. These charts are required for use of the TMQ C-Plot Max Pro software.

Changing the view properties of the Charts is done when the C-Map Chart is loaded.

### 3.12.1 Multimedia Content

The charts have the capability of displaying Images for Various points of interest on your Chart.



Right clicking once on the cursor  and then clicking over the Camera Image, the object information box will be shown.

Selecting the Multimedia Content from the list will then display the associated image with the Camera.









Double Clicking on the image will bring up a full size image in another dialog Box.

### 3.12.2 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



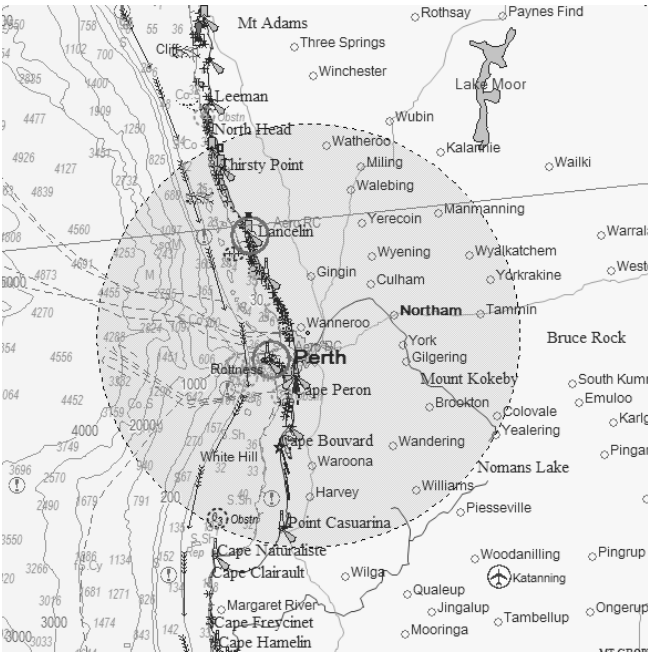
#### Extended C-Map Keypad:

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
<b>A</b>	World Charts	1:3,500,000 to 1:1,500,000
<b>B</b>	General Charts	1:1,500,000 to 1:500,000
<b>C</b>	Coastal Charts	1:500,000 to 1:150,000
<b>D</b>	Intermediate Coastal/ Approach Charts	1:50,000 to 1:50,000
<b>E</b>	Approach Charts	1:50,000 to 1:15,000
<b>F</b>	Harbour Charts	1:15,000 to 1:5,000
<b>G</b>	Plan Charts	Larger than 1:7,500
<b>W</b>	Global Charts	1:20,000,000

3.12.2 GMDSS



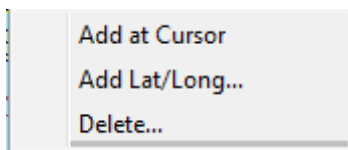
GMDSS area’s are defined on the chart by a Green shaded Area. If you do not wish to see this. turn off the GMDSS option when managing C-map Charts.



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## 4.0 Marks

The **Marks Menu** facilitates access to C-Plot functions pertaining to marks. 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. fishing areas, location of pots, hookups, etc). This menu can be accessed from the main chart display using one of the following access sequences.



### 4.1 The ‘Marks – Add at Cursor’ Function

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

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 clicking with the mouse button 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.

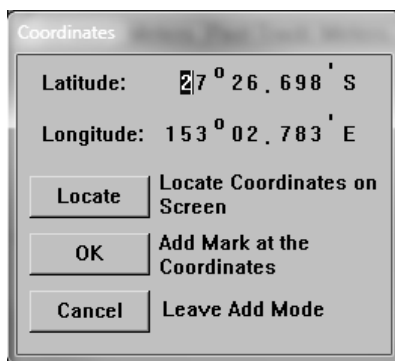
‘ADD Mark’ Bar:



### 4.2 The ‘Marks – Add at Lat/Long’ Function

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

Upon accessing this function a dialogue box will appear accompanied by an ‘ADD Marks’ coloured bar. Use the mouse, keyboard arrow buttons or the TAB key to step through the co-ordinate boxes. 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 at the bottom of the screen before the mark is




added. The locate buttons centres the new location on the chart window. Click ‘Cancel’ to return to normal chart display mode.

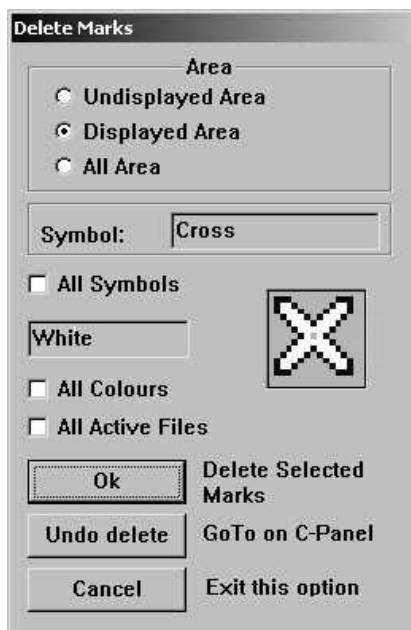
### 4.3 The ‘Marks - Delete Marks’ Function

The **Delete Marks** function allows a mark, or collection of marks, to be removed. This function will delete marks from the current Active Save file.

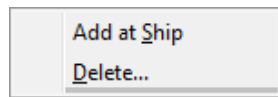
Marks can be selected and deleted according to a number of selection criteria, position, symbol and colour. The **Area** section allows marks to be selected by position, simply click on the desired area type. The **Symbol** field allows the marks to be selected by symbol type. Clicking on the symbol 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. Tick the All active files button will delete this selection from all active Save files.

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.*



## 5.0 Events

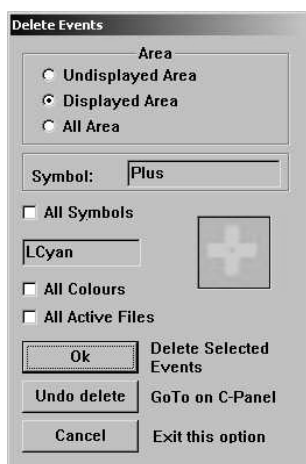


The **Events Menu** facilitates access to C-Plot functions pertaining to events. Events are symbols that can be positioned on the main chart display to allow the user to record the position of relevant information (i.e. fishing areas, location of pots, hookups, etc).

### 5.1 The ‘Events – Add at Ship’ Function

The **Events – Add at Ship** function adds an event symbol at the vessel’s current position. 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.

### 5.2 The ‘Events - Delete Events’ Function




The **Delete Events** function allows an event, or collection of events, to be removed. This function deletes events from the current Active Save file.

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. Ticking the all active files button will delete events from all Current Active save files.

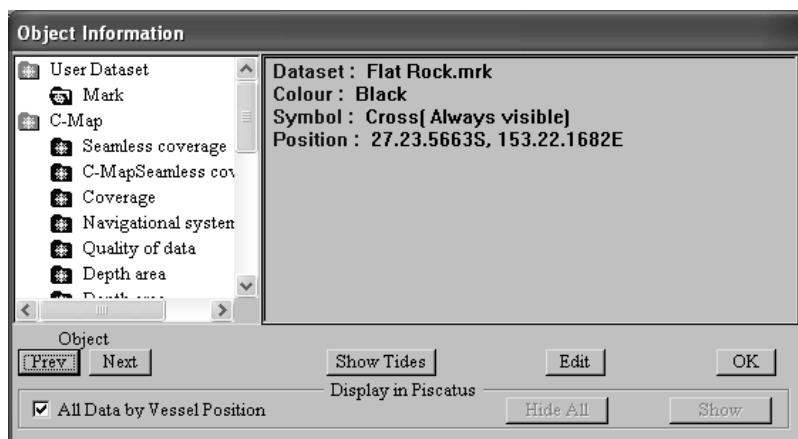
To accept the selection criteria and delete the selected events click ‘OK’. Clicking the ‘GoTo’ button will undo the last delete that was performed, while clicking ‘Cancel’ will return to normal chart display mode.

 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).

## 5.7 Editing Marks / Events

The editing of Marks and Events is done via the Object information window.

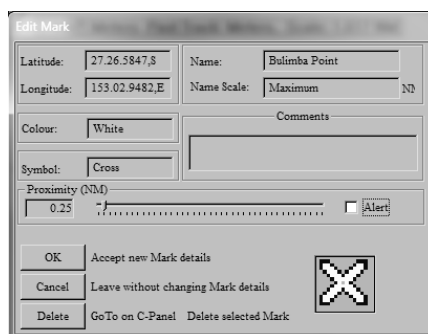
Right clicking once on the cursor  and then clicking over the object in question, the object information box will be shown



### 5.7.1 Edit 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
- ✦ An Alert condition when the boundary is entered



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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.


### 5.7.2 Editing Events

The **Edit Events** dialog 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

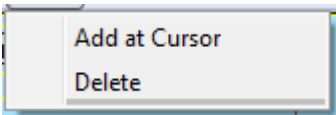
To make changes to any of these properties simply click in the appropriate data field. In each case an edit box will appear displaying the current data ('Old Data') and a data field to input the 'New'. Click 'OK' to accept any changes or 'Cancel' to return to the 'Edit Event' dialogue box. The colour and symbol properties are modified using the appropriate dialogue box, which appears when either of those fields is clicked.

**Edit Event**

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

# 6.0 Lines

Lines are used to display simple lines on any chart. The **Lines Menu** facilitates access to C-Plot functions pertaining to lines. To edit a line, this is performed through the object information window.



## 6.2 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.

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.

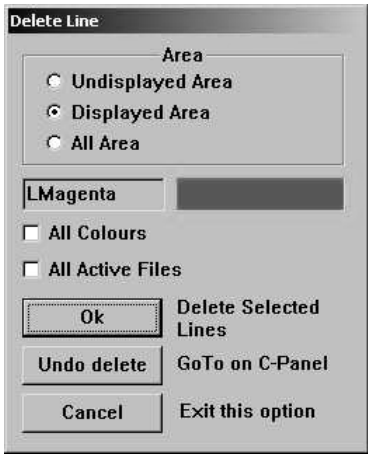


‘ADD  
LINE’ Bar:


## 6.3 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 lines from the current active dataset.

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. Ticking the All Active files button will delete all lines in the selection from the current active save files.




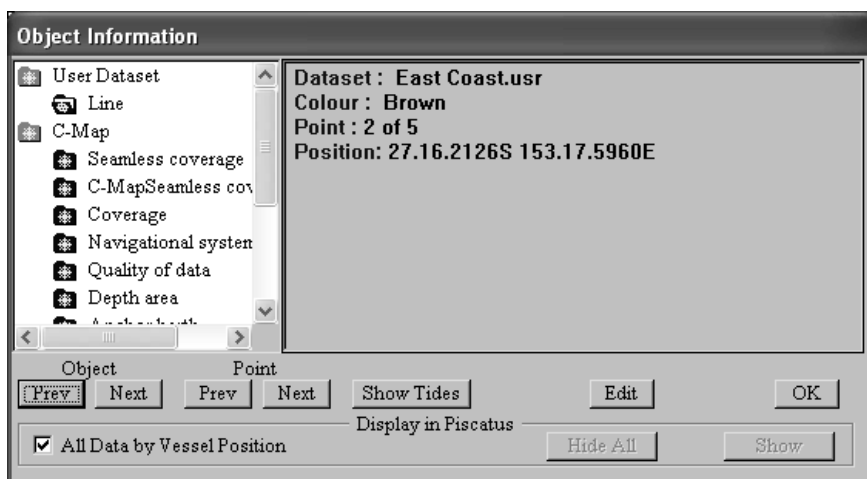
Clicking ‘OK’ performs the delete operation on the lines that meet the selection criteria. ‘GoTo’ reverses the previous ‘Delete’ operation performed on one or more lines. ‘Cancel’ returns C-Plot to chart display mode.

 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 (☐)

## 6.4 Editing Lines

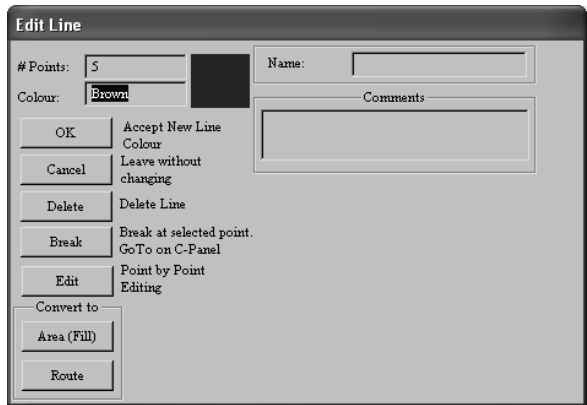
The editing of Area’s and fills is done via the Object information window.

Right clicking once on the cursor  and then clicking over the object in question, the object information box will be shown



Selecting Edit from the Object information Dialogue brings up the following Window.

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



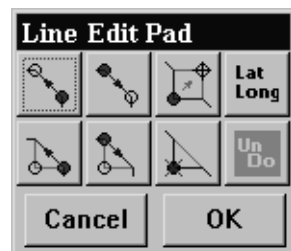
The ‘# Points’ field contains the number of points that are contained in the line. Clicking on the ‘Colour’ field invokes an ‘Edit Colour’ dialogue box.

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).

### 6.4.1 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’.





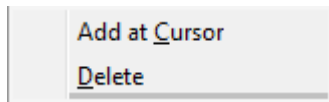
Symbol	Function	Description
	Go Forward	This button causes the next point on the line to become the selected point.
	Go Backward	This button causes the previous point on the line to become the selected point.
	Drag & Drop	This button allows the position of the selected point to be changed using the cursor. 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.

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.

---

## 7.0 Areas & Fills


Areas can be used to indicate restricted regions and danger zones on any chart. The **Areas (Fills) Menu** facilitates access to C-Plot functions pertaining to areas and fills. To edit a fill, this is performed by the object information window.




### 7.2 The ‘Area – Add at Cursor’ Function

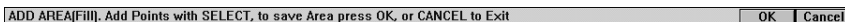
The **Add at Cursor** function enables the cursor to be used to draw an area onto the chart display.

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.

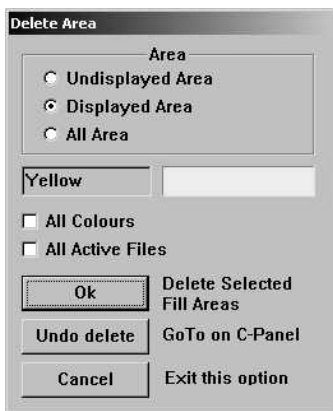
 *When drawing an Area, C-Plot automatically joins the start and the end of the boundary to ensure that the area is closed.*

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

‘ADD AREA (fill)’ Bar:



## 7.3 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.

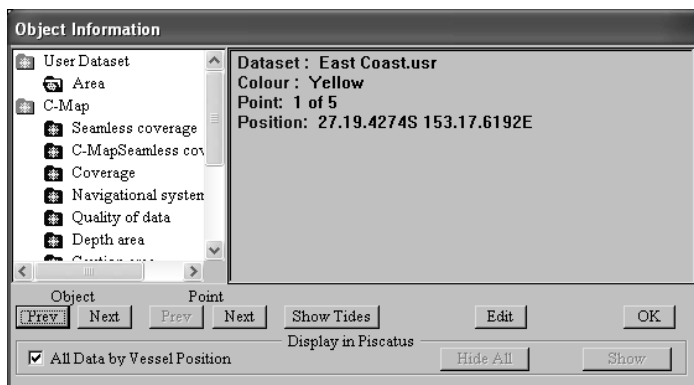
The **Area** section allows areas to be selected according to position. Clicking in the colour data field invokes an 'Edit Colour' dialogue box, allowing areas to be selected by colour. Ticking (☒) the 'All Colours' box will select all the areas in the selected area. Ticking the All Active files button will delete the fills from all current active save files.

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.

## 7.4 Editing of Areas & Fills

The editing of Area's and fills is done via the Object information window.

Right clicking once on the cursor  and then clicking over the object in question, the object information box will be shown.



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Selecting Edit will then bring up the Edit Area Dialogue.

**Edit Area**

# Points: 6

Colour: Yellow

Name:

Comments

OK Accept New Area Colour


Cancel Leave without changing

Delete Delete Area

Convert Convert to Line

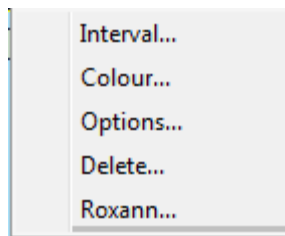
You can then add or change the details for the Area.

The ‘# Points’ data field contains the number of points contained in the outside of the area. The ‘Colour’ field enables the 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 outside of the area into a line.

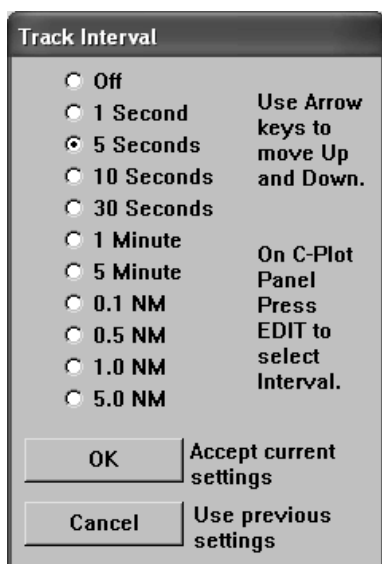
 *The delete area function deletes the Area from the Dataset the area is contained in. This means the Area will be removed from the file that contains it. There will be no undo function.*

## 8.0 Track

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 C-Plot functions pertaining to the vessel's track..




### 8.1 The 'Track – Interval' Function




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 stored*

*while it is OFF.*

 *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.*

### 8.2 The 'Track - Colour' Function

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

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.

### 8.3 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
- Seabed (Roxanne)
- Speed

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.

Track Display Options

Set Shift 0 Metres

Set Scale 1 Metres

Set Width 3 Pixels

Set Mode

- ☐ Colour
- ☒ Depth
- ☐ Hardness
- ☐ Temperature
- ☐ Seabed
- ☐ Speed

☐ Display Colour Table

☒ Display Tracking Timer

OK Current Settings are accepted

Cancel Previous settings are not changed

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

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).

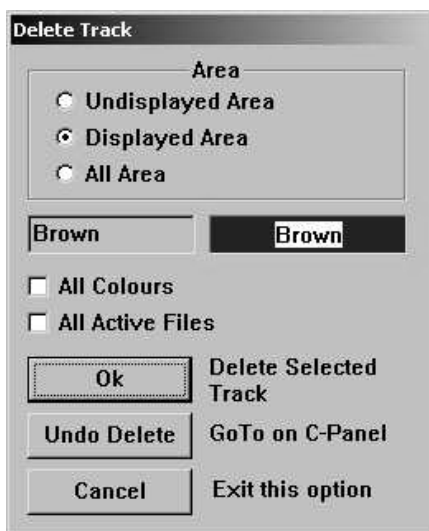


*The coloured bar is not displayed when the track has been set to ‘Colour’ mode.*

### 8.3.1 Track Timer

Selecting the DisplayTracking Timer will display a Timer from the point the track was started. If the track was started at the start of a Trawl, this will show the time elapsed for the current trawl.

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.



### 8.4 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.

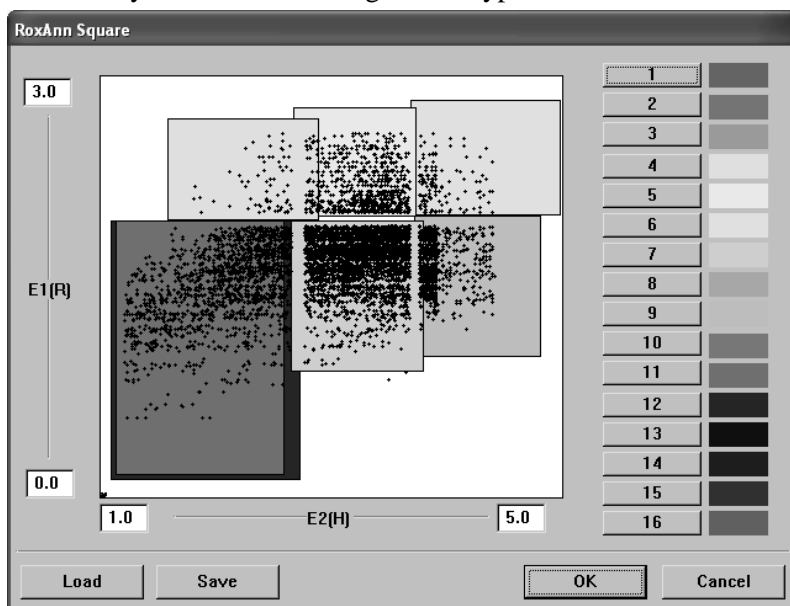
The **Area** section allows tracks to be selected according to position. Clicking in the colour data field invokes an ‘Edit Colour’ dialogue box, allowing tracks to

be selected by colour. Ticking (☑) the 'All Colours' box will select all the tracks in the selected area.. Ticking the All active Files button will delete track from all current active save files.

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.

## 8.5 The Roxanne Plotting Function

Track can now be displayed according to the classification system by a Seabed Mapping device known as Roxanne. This device produces accurate and repeatable bottom analysis data for showing seabed type.





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## 8.6 Editing Track

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

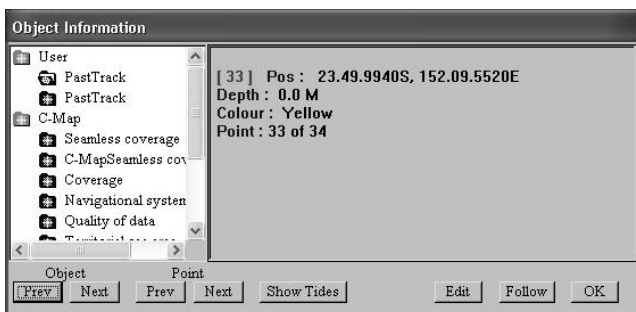


The ‘# Points’ data field displays the number of points contained in the selected track. The ‘Colour’ data field displays the selected track’s colour. Clicking in this field invokes an ‘Edit Colour’ dialogue box, simply click on the desired colour and then click ‘OK’ to accept the change or ‘Cancel’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

## 8.7 Following Track

The routes follow track option allows the user to follow existing track that is saved in the system. Using the Object information Cursor, Select an existing track on your System



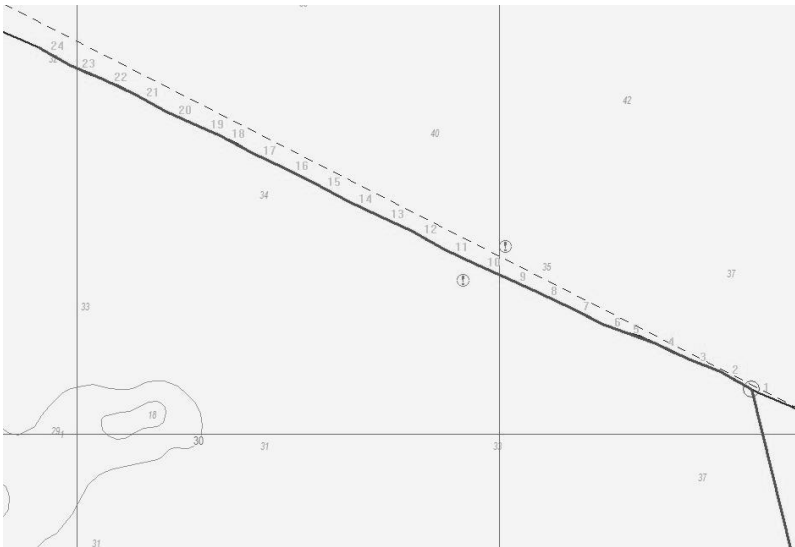
Select Follow from the options at the bottom of the Object Information Dialogue. If you do not see Follow, you haven’t selected on a User Track. When you select follow, you will see the following Bar at the bottom of the screen.

SELECT FOLLOW TRACK END. Place cursor at finishing position then press OK, or CANCEL to Exit OK Cancel

Select the end of the track you wish to go to. Note: This end of track must be on the same track segment in memory.



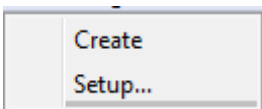
Then Click On OK. The New Route will now sequence along the Track.



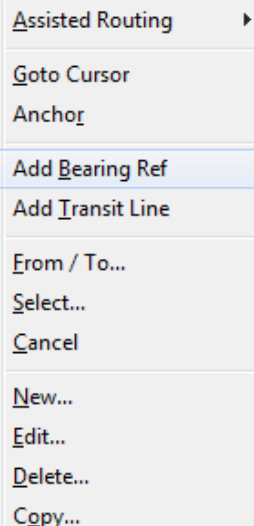
## 9.0 Routes

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 C-Plot functions pertaining to routes.

### 9.1 The 'Assisted Routing' Function

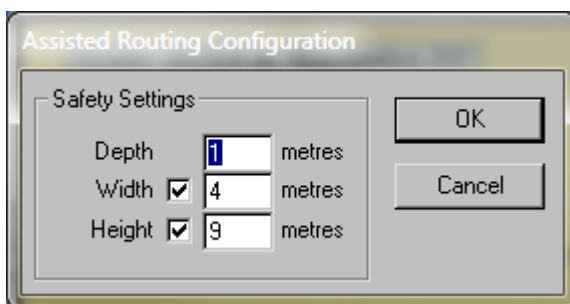


The **Assisted Routing** function is only Available with Navionics Charts.



Simply Click Create, and then click between 2 locations of the Chart Screen, and the System will generate a Navigable Route between the 2 locations.

To configure the Vessel details for the System, Click Setup.



## 9.2 The ‘Routes - Goto Cursor’ Function

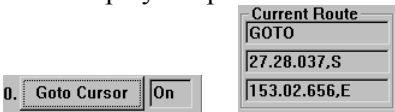
The **Goto Cursor** function enables a waypoint to be placed using the cursor.

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’).

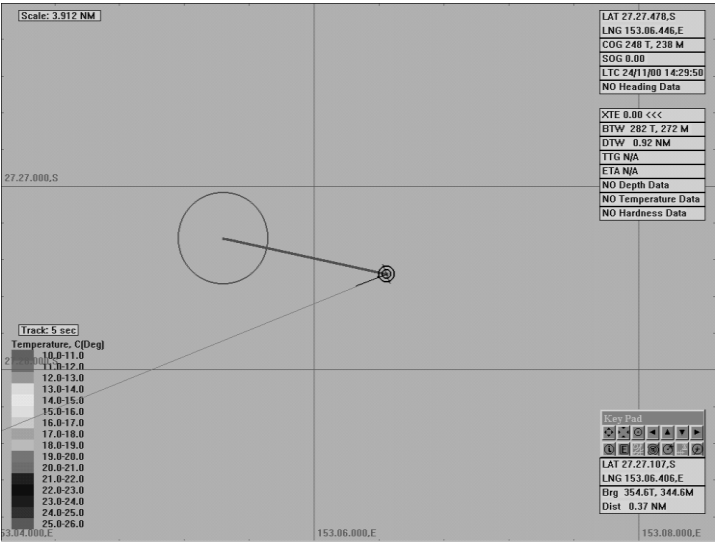


Figure 8.1

## 9.3 The 'Routes - Anchor' Function

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

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 9.2). The size of the anchor zone can be set via the **Settings** menu (Section 11.6). 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:

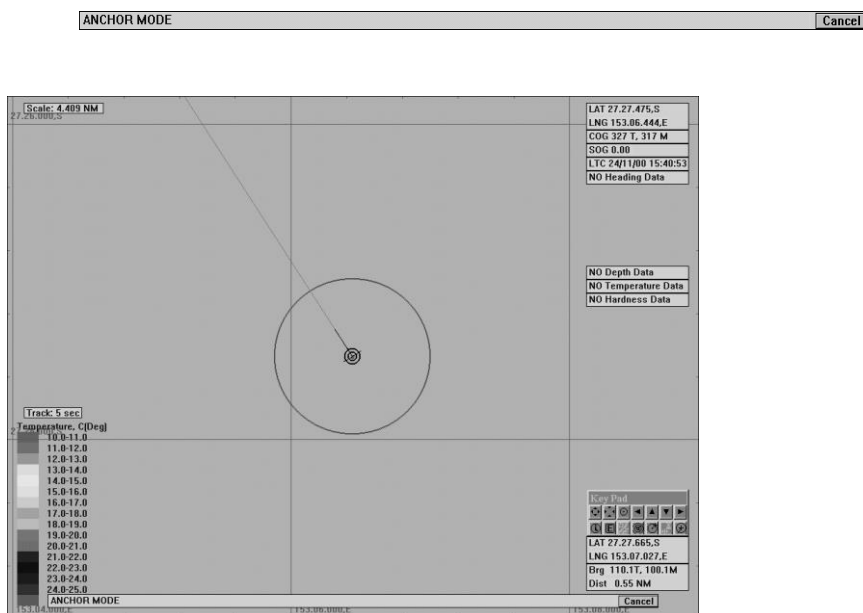


Figure 9.2

## 9.4 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.

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

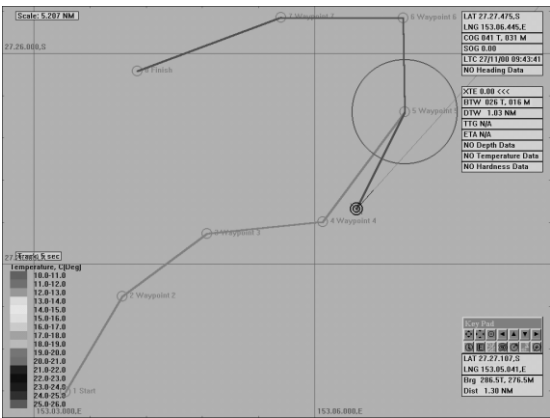
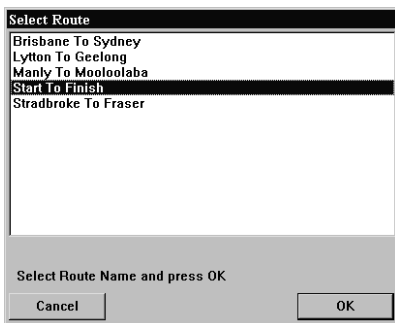


Figure 8.3

## 9.5 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).

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.

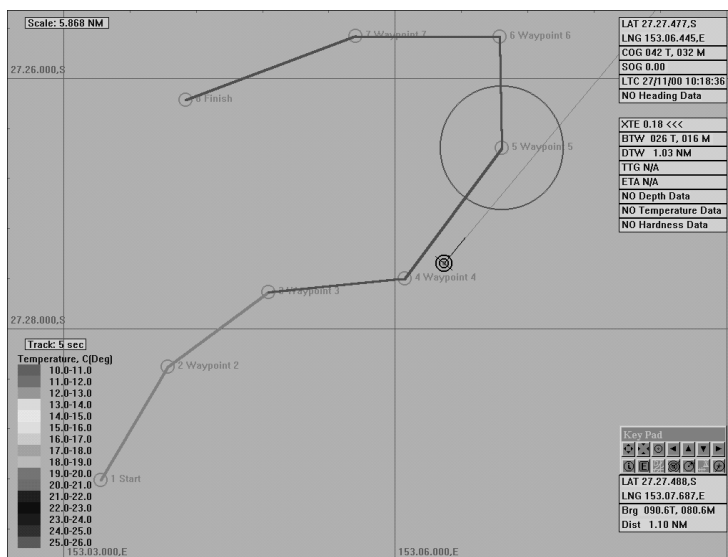


Figure 8.4

## 9.6 The 'Routes – Cancel Route' function

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

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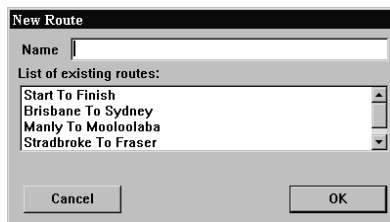
## 9.7 The ‘Routes – Create New’ Function

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

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:

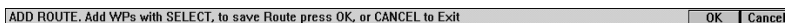
Start Point Name followed by the word ‘To’ then the Destination Name

To name the new route 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.

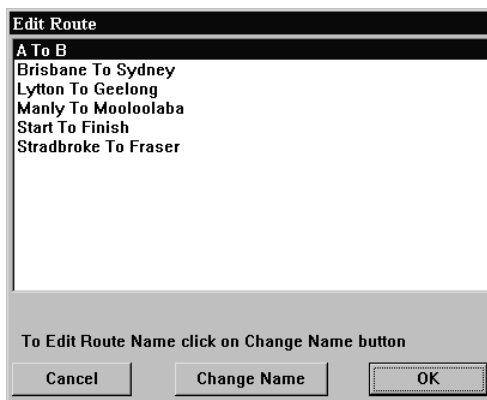
‘ADD ROUTE’ Bar:



## 9.8 The ‘Routes - Edit’ Function

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

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 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 9.5. To enter a name for a particular waypoint, select the ‘Name’ column of the point in the Route Table and enter the new name.

**Edit Route**

A To B  
 Brisbane To Sydney  
 Lytton To Geelong  
 Manly To Mooloolaba  
 Start To Finish  
 Stradbroke To Fraser

A To B

To Accept New Name click on ACCEPT NEW NAME

Accept new Name

**Figure 9.5**

**Route : Great Sandy Straights**

	Number	Name	Lat	Lng	Brg (Deg)	Dist NM
◀	1		27 18.3257 S	153 09.2589 E		
▶	2		27 17.0815 S	153 11.7842 E	61.0	2.568 NM
▶	3		27 16.7663 S	153 15.2194 E	84.1	3.077 NM
▶	4		27 17.6622 S	153 17.3920 E	114.9	2.130 NM
+	5		27 19.7023 S	153 18.0047 E	165.1	2.113 NM
-	6		27 21.1450 S	153 17.7819 E	187.8	1.457 NM

Points : 6      Point to centre      Total Distance: 11.346 NM

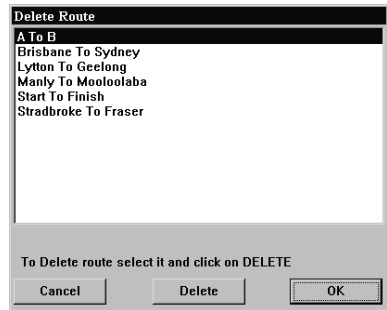
Copy to clipboard

---

## 9.9 The 'Routes - Delete' Function

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

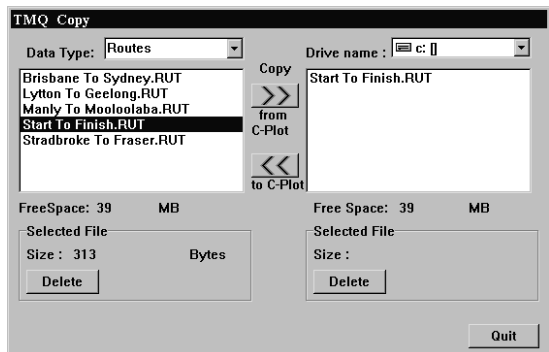
Simply select the route to be removed in the 'Delete Route' dialogue box and click on the 'Delete' button. Clicking 'Cancel' will return C-Plot to normal chart display mode.



## 9.10 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.

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

# 10.0 Tools

## 10.1 The Search Light Menu

The Search Light function allows control of a Colorlight Search Light

You can select a location to Lock onto and the C-plot system will automatically keep the light on the required target.

<u>S</u> earch Light ▶	<u>T</u> rack
	<u>S</u> ynchronise
	<u>C</u> onfigure



Search Light Settings

Configuration

Search Light Offset

2

2

13

2

Height

135

meters

Address

FFFFFF

In Use

☐ Left Light ☐ Right Light

A schematic diagram showing a searchlight beam with a central target point. Dashed lines indicate horizontal and vertical offsets from the center.

Mode

Beam

Focus

Left

☒ narrow ☐ wide

Right

☒ narrow ☐ wide

Beam Width

Speed

Initial

Tracking

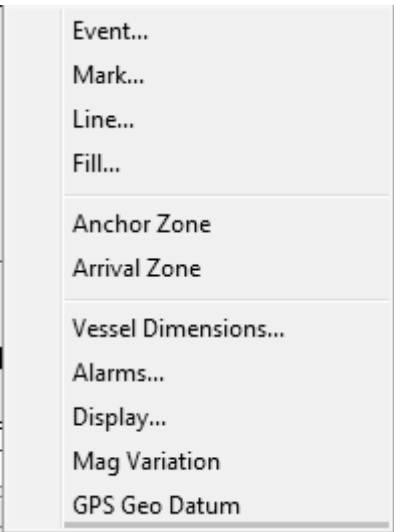
OK

Cancel

A configuration page is available to set up Search light details.

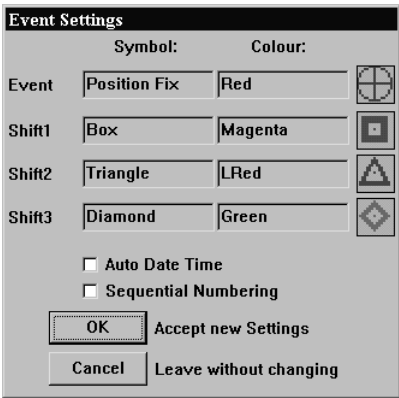
# 11.0 Settings

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.



## 11.1 The ‘Settings - Event’ Function

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



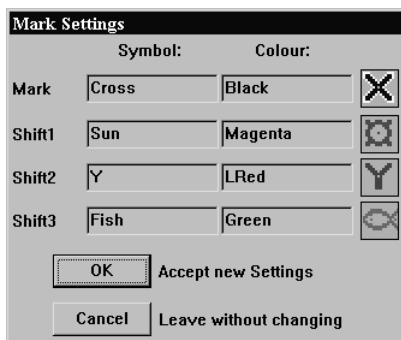
The ‘Auto Date Time’ box allows the time and the date to be automatically entered into an event’s information at the time of creation. To enable this feature simply ‘tick’ the box (☑). If this box is not ticked (☐) this feature has been disabled. The ‘Sequential Numbering’ feature automatically numbers 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.

---

## 11.2 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).



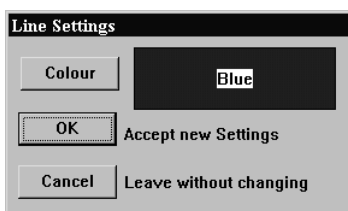
The ‘Mark Settings’ dialogue box allows the 4 default symbol/colour combinations to be set. To change any of the symbols simply click in the appropriate symbol field to invoke a ‘Symbol Edit’ dialogue box. To change any of the symbols colours simply click in the appropriate colour field to invoke a ‘Colour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

## 11.3 The ‘Settings - Line’ Function

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

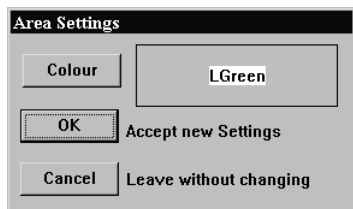
To change the default colour of lines in C-Plot simply click the colour button. This will invoke an ‘Edit Colour’ dialogue box. Click on the desired colour and then ‘OK’. Clicking ‘Cancel’ will return to the ‘Line Settings’ dialogue box. Click ‘OK’ on the ‘Line Settings’ dialogue box to accept the line settings, or ‘Cancel’ to return C-Plot to normal chart display mode.



---

## 11.4 The ‘Settings – Area (Fill)’ Function

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



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.

## 11.5 The ‘Settings – Anchor Zone’ Function

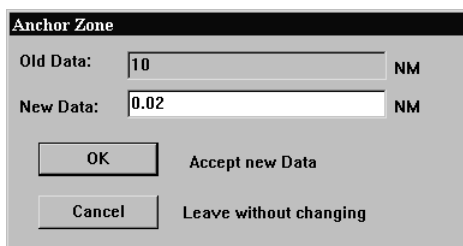
The **Anchor Zone** function allows the radius of the anchor zone to be set. The anchor zone radius must be between 0.02NM and 10NM. The anchor zone size is used while in anchor mode (See Section 8.3).



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



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.



---

## 11.6 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)

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.

## 11.7 The ‘Settings – Vessel Dimension’ Function

This page allows for setting up of the Vessel particulars. Also registration details are included on this screen, these registration details enable TMQ to continue to support and advise of future updates.

## 11.8 The 'Settings - Alarms' Function



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

The concept of setting the alarm parameters is straightforward. Simply clicking the appropriate function access button, will 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. **Roughness** – This alarm will be activated if Roughness data is no longer being refreshed.

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



**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.

**CPA Alert.** This Parameter enables or Disables all CPA Alerts.

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

## 11.9 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.

Ship Position Data   Input 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

Depth 29.90 M
Temp 22.88 C
NO Hardness Data

**Key Pad**

Key Pad:

**Display Settings**

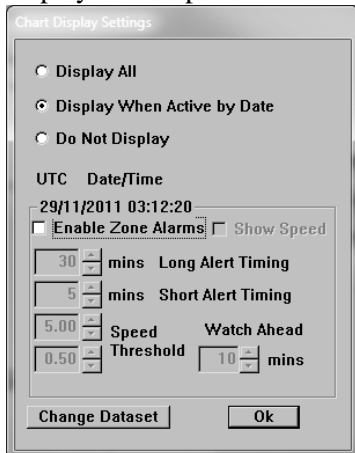
0.	Time	Off
1.	COG	On
2.	Heading	Off
3.	SOG	On
4.	Depth	On
5.	Temperature	Off
6.	Hardness	Off
7.	Key Pad	On
8.	Trawl Rig	Off
9.	Chart Display	
<b>OK</b>		

The concept of setting the display parameters is straightforward. Simply clicking the appropriated function access button with the mouse to toggle each display parameter.

---

## 11.9.1 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.



**With GPS Data being received**



**Without GPS Data being received**

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

If you do not need any alarm warnings, you can switch this alarm off by selecting the “Do not Display and use” option.

## 11.9.2 Dataset Activation / Selection

C-Plot automatically identifies encrypted data such as Closure Areas information. This data can be installed from a dedicated CD, e.g. QFS (East Coast Trawl Closure- Queensland DPI), GBRMPA Area closure or from the original C-Plot Installation Disc for NPF (North Prawns Fisheries) Authorities Closure files.

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

The ‘Status’ of each Dataset can be toggled between ‘Active’ and ‘Not Active’ by clicking on the word ‘Active’ or ‘Not Active’. To save the new settings click the “OK” button, this will then exit the ‘Dataset Manager’ window. C-Plot will reset all 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

### 11.10 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.



Edit Magnetic Variation

Old Value: 10E

New Value: 10E

OK

Accept New

Cancel

Leave without Changing

Use From

☐ TMQ Chart

☐ External(NMEA 0183)Source

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

8. Mag Variation 10E

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.

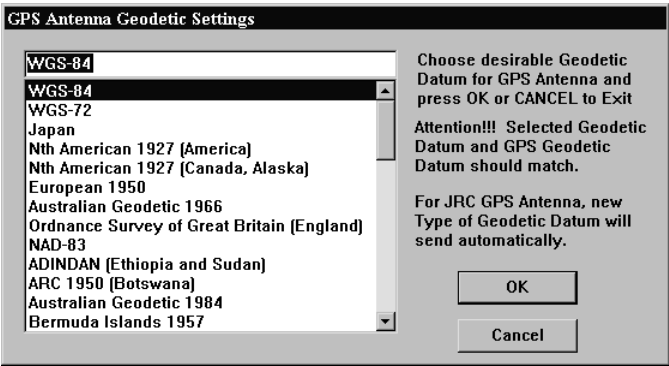
---

# 11.11 The ‘Settings – Geodetic Datum’ Function

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

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).



# 12.0 System

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.

System Options

0. PaletteDay

1. System Info

2. Zoom Step Size50 %

3. Config

4. COM Ports Config

5. Colours

6. Exit

7. Shut down

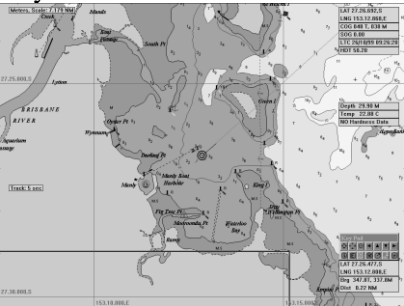
Cancel

## 12.1 The ‘System - Palette’ Function

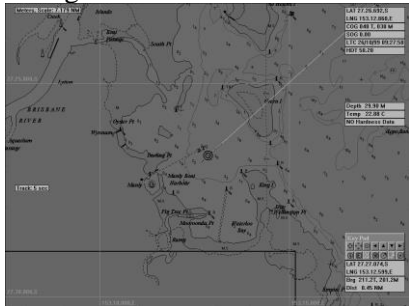
The **Palette** function enables the colour scheme of the overall main chart display to be altered, depending the amount of ambient light. The palettes are named according to what time of the day they should be used.



Day Palette:



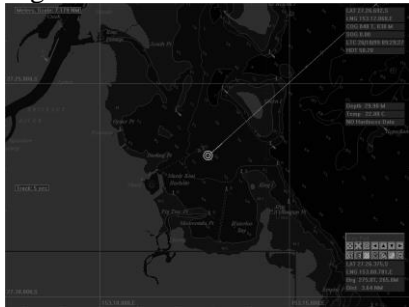
Twilight Palette:



Dusk Palette:



Night Palette:



Palettes

DayLight

Twilight

Dusk

Night

OK

Cancel

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.

## 12.2 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.

System Information

C-Plot v1.4.0 (Beta3)

Serial Number: 0987-001C-0000-0217 (P:0128 G:0001)

Number of User Data Points:

77

Number of Mark Points:

54

Number of Track Points:

84656

Trip Distance:

23753.32 NM

RESET Trip

Memory in use:

94

%

Total

Available

Physical Memory:

2059128

119824

KB

Page File Size:

4194303

964932

KB

Virtual Memory:

2097024

1764548

KB

OK

Reading the information displayed in this dialogue box is straightforward. Click ‘OK’ to return C-Plot to normal chart display mode.

A trip meter is available for distance travelled as indicated by GPS. This can be reset at any time.

## 12.3 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%.


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



When modifying zoom step size an ‘Edit Value’

2. Zoom Step Size 50 %

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.

 *Zoom Step Size cannot be modified when using HCRF Charts it is set to a default of 50%.*

**Edit Value**

Old Data: 50 %

New Data: 50 %

OK Accept new Data

Cancel Leave without changing

## 12.4 The ‘System - Config’ Function

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

**TMQ C-Plot System Configuration**

**Display**

- ☒ Small Cursor
- ☐ Full Screen
- ☐ Grid

**Vessel**

- ☐ Watch Ahead
- ☒ Ship Symbol
- ☒ Extended Course
- ☒ Display 2nd GPS
- ☒ Auto Tracking
- ☒ Extended Heading
- Heading Line Length: 48

**Radar**

- ☒ Radar EBL North

**Auto BackUp**

Interval In

User: 23

Mark: 17

Track: 19

ActivTrack: 11

**Track Contents**

- ☒ Speed
- ☒ SpdThrWtr
- ☒ Course MG
- ☒ Date Time
- ☒ Heading
- ☒ Tide Height
- ☒ Temperature
- ☒ Hardness
- ☒ Roughness

**Raster Charts DB**

Max Charts to Load: 3

**NMEA Settings**

XTE Decimal: 4

Places: Bearing Format: XX

**Vertical Datum**

- ☒ Meters
- ☐ Fathoms/feet

**Temperature**

- ☒ Celsius
- ☐ Fahrenheit

**Dongle Type**

- ☐ HASP
- ☐ MG

**Horizontal Datum**

- ☒ Nautical Miles
- ☐ Kilometres (Km)
- ☐ Metres (m)
- ☐ Feet (ft)

**Chart**

- ☐ Solid Fill on Chart

**Display**

- ☒ Small
- ☐ Medium
- ☐ Large
- Opacity %: 70

**AutoPilot Type**

- ☒ TMQ
- ☐ FURUNO
- ☐ Robertson
- ☐ Old TMO AP404
- ☐ Other

**NMEA Sentences Out**


	AAM	APB	BOD	BWC	DBT	GLL	HDT	RMB	RMC	THS	TTM	VTG	XTE
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Version: 4 2

Cancel Save

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.*



### 12.4.1 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       | ✓ Temperature         |
| ✓ Course      | ✓ Tide Height         |
| ✓ Date & Time | ✓ Hardness            |
| ✓ Heading     | ✓ Roughness           |
| ✓ Depth       | ✓ Speed Through water |

### 12.4.2 The 'Display' Section

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

- **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.
- **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 and a windows mode controls will function.
- **Grid** – This tick box toggles a Lat/Long grid on the chart screen.

### 12.4.3 The 'Vessel' Section

- **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.

- **Ship Symbol** – This tick box toggles the ship symbol display as an option to show the real size of vessel at lower scales.
- **Extended Course** –When this box is ticked (☒) the course line will be displayed to the edge of the Chart Window.
- **Display 2<sup>nd</sup> GPS** – This tick box allows the 2<sup>nd</sup> GPS to be displayed on the screen, if you feed in a GPS feed from a VMS box, then this will show the location that the VMS is transmitting.
- **Auto Tracking** – This tick box allows the system to re-centre the vessel when ever the vessel moves off the screen in any display mode.
- **Extended Heading** – When this box is ticked (☒) the heading line Is shown extended to the edge of the Chart Window.
- **Heading Line Length** – If not using Extended heading, you can specify the length of the Heading Vector in Screen Pixels.

#### 12.4.4 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.

#### 12.4.5 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.*

#### 12.4.6 The 'Temperature' Section

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

## 12.4.7 The ‘Dongle Type’ Section

Version 1.4 is only configured to use the I-Key or HASP dongles.

## 12.4.8 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. This will autoconfigure the NMEA Sentences / NMEA settings section.

## 12.4.9 The ‘NMEA Sentences / NMEA Settings’ Section

This section allows the NMEA data output messages to be configured from C-plot to interface to external equipment. Some equipment is very particular to the version and type of sentences used.

## *12.5 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 the C-Plot Installation Guide



**TMQ C-Com**  
(Communications  
Server)

TMQ Communication Server v 4.7.4.3.					
NMEA Data   Target Information   Input Configuration   Output Configuration   Serial Setup   Serial I/O					
Type	Data	Age (sec)	Source	Comm Port	
Position 1	27.27,476.S 153.06,445,E	0	GGA	COM3	
Position 2	27.27,476.S 153.06,445,E	0	RMC	COM3	
Date (dd/mm/yy)	29/04/05	0	RMC	COM3	
Time (GMT)	05:27:50	1	RMC	COM3	
COG (T)	223 (T)	0	RMC	COM3	
Heading (T)	0.10 (T)	0	HDT	COM3	
Heading (M)	0.00 (M)	0	HDG	COM3	
SOG	0.10	0	RMC	COM3	
Magnetic Variation	11.2E	0	RMC	COM3	
Magnetic Deviation	0E	0	HDG	COM3	

Visit the TMQ Electronics Website at [www.tmq.com.au](http://www.tmq.com.au)   Hide

### Simple Method for Setting up TMQ CComs

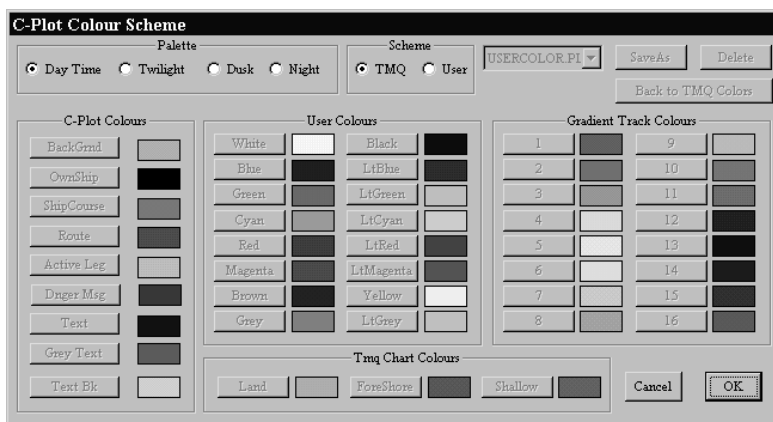
- In the Serial Setup Tab, enable the Communications port that you think the NMEA Device is plugged into if your device is not listed, select scan and add it to the list and then enable the device.

- Under the Serial I/O Tab confirm there is input data coming from your NMEA device, If there is no Input data, you have the wrong communication port selected or your Device is not plugged in, or your Device isn't working.
- Check the NMEA device is sending an NMEA sentence. Check the first 5 characters of each line for the Data, NMEA GPS data starts with \$GPGGA or \$GPRMC
- Under the Input Configuration Tab, setup the corresponding input for your NMEA Device.
- Check the Data under the NMEA Data Tab or the Targets Tab for data from your Device.

**Hint: Try the above checklist before contacting TMO. We will refer you to this page.**

## 12.6 The 'System - Colour' Function

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




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.

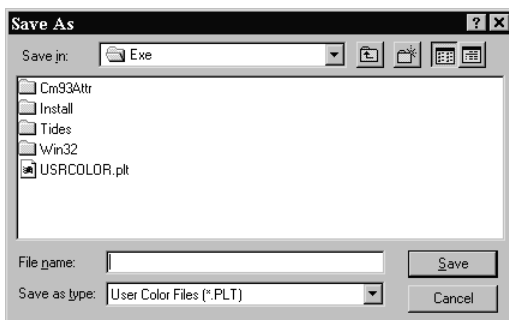
### 12.6.1 The 'Palette' Section

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

## 12.6.2 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.

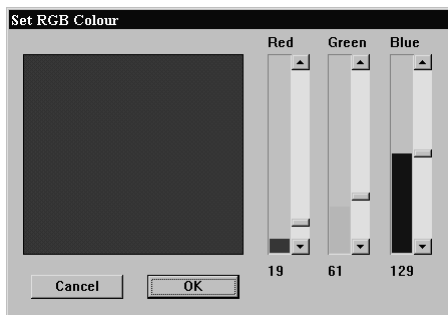
 *The ‘TMQ’ colour scheme **cannot** be changed. Only ‘User’ colour schemes can be customized.*



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.

## 12.6.3 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.

---

## 12.6.4 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.

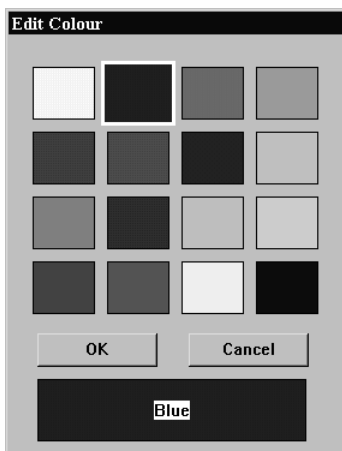
- ☒ **BackGrnd** – This colour represents the background colour of the chart (i.e. the colour of normal water).
- ☒ **OwnShip** – This colour represents the colour of the ship symbol used to show the vessel’s position on the chart.
- ☒ **ShipCourse** – This colour represents the colour of the course 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.

## 12.6.5 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)

## 12.6.6 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**

### 12.6.7 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.

## ***12.7 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.

## ***12.8 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).

# 13.0 Targets

## 13.1 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, of the movements of other vessels or buoys.

Target data sources include AIS (Automatic Identification System), ARPA (Automatic Radar Positioning Aid), Ryokuseisha Tuna catch buoys, VHF DSC and Taiyo buoys.

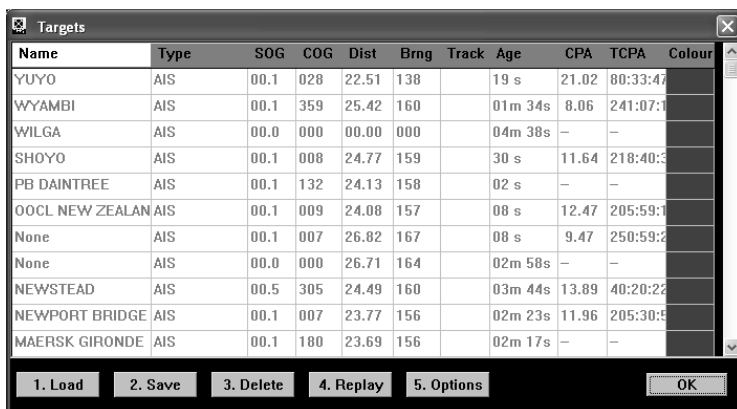
C-Com requires configuring to enable the type of target to be tracked, the sentences required are as follows:-

- AIS Targets require AIVDM, AIVDO, AITXT, AIALR
- 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.)
- DSC Targets require DSC messages from a DSC enabled VHF radio

## 13.2 Targets

All targets are displayed in the ‘Targets’ window as shown below. The data can be ordered as

required by clicking on the data field type at the top of the table. Data field types are:- Name, type, SOG, COG, Dist, Bearing, Track, Age, CPA, TCPA and Colour.

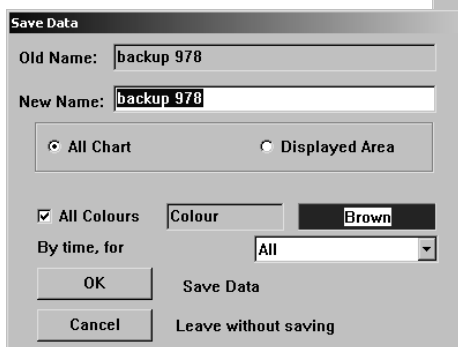
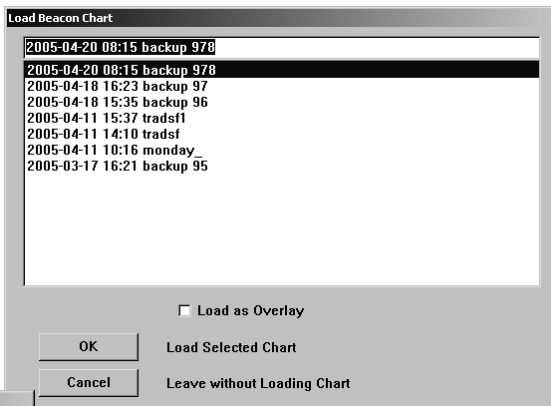


Name	Type	SOG	COG	Dist	Brng	Track	Age	CPA	TCPA	Colour
YUYO	AIS	00.1	028	22.51	138		19 s	21.02	80:33:47	
WYAMBI	AIS	00.1	359	25.42	160		01m 34s	8.06	241:07:1	
WILGA	AIS	00.0	000	00.00	000		04m 38s	—	—	
SHOYO	AIS	00.1	008	24.77	159		30 s	11.64	218:40:3	
PB DAINTREE	AIS	00.1	132	24.13	158		02 s	—	—	
OOCL NEW ZEALAN	AIS	00.1	009	24.08	157		08 s	12.47	205:59:1	
None	AIS	00.1	007	26.82	167		08 s	9.47	250:59:2	
None	AIS	00.0	000	26.71	164		02m 58s	—	—	
NEWSTEAD	AIS	00.5	305	24.49	160		03m 44s	13.89	40:20:22	
NEWPORT BRIDGE	AIS	00.1	007	23.77	156		02m 23s	11.96	205:30:5	
MAERSK GIRONDE	AIS	00.1	180	23.69	156		02m 17s	—	—	

1. Load   2. Save   3. Delete   4. Replay   5. Options   OK

### 13.2.1 Load

The ‘Load’ function loads onto the chart as an overlay the dataset from a previous save. This will be the vessel and track information for all the vessels that were tracked during that period. For example, the Port Authority might make a daily save, this would include all the vessel movements recorded on that particular day. When this data is then loaded the past track of the vessels can be examined and queried.



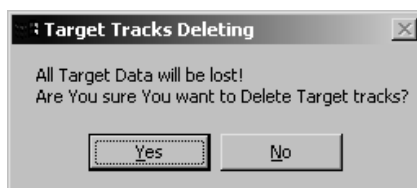
### 12.2.2 Save

The ‘Save’ function enables all the currently displayed vessels and tracks to be saved for future review. When saving a unique name is required to be provided. Either the displayed area or the whole chart can be saved. A particular track colour can be saved this is achieved by clicking on the colour name

(next to the box with the example colour in it). This will then display the colour selection window, simply select the colour track required. Alternatively all track colours can be saved by ‘ticking’ the ‘All Colours’ box. Click the ‘OK’ box to save the selected data.

### 13.2.3 Delete

The ‘Delete’ option will delete all the currently displayed targets and tracks. This function will not delete the saved tracks.



### 13.2.4 Replay

The ‘Replay’ function allows the data in the vessel table to be replayed at a user selectable time scale. Previous data sets can be loaded using the ‘Load’ function and then replayed. Times and dates can be adjusted to enable the user to replay a specific period as required.





## 13.2.5 Options

The ‘Target Options’ window allows the user to customize the displayed data to suit their needs.

The screenshot shows the 'Target Options' dialog box with the following settings:

- Track Display Options:**
  - ☐ Show Whole Track
  - Show Last: 0 H 5 M
- TMQ Radio Data Modem:**
  - ☒ Display Target Names
  - ☒ Auto Track New Targets
  - ☒ Extended COG Vector
  - All Data
- Trackers:**
  - ☒ Display Tracker Names
  - ☒ Auto Track New Targets
  - ☒ Extended COG Vector
  - Break: 300 secs
  - Extend: 150 secs
- AIS:**
  - ☒ Display Target Names
  - ☐ Auto Track New Targets
  - ☒ Extended COG Vector
  - All Data
- ARPA:**
  - ☒ Display Target Names
  - ☒ Auto Track New Targets
  - ☒ Extended COG Vector
  - All Data
- DSC:**
  - ☐ Auto Track New Targets
  - 0.01 NM
- Fleet:**
  - ☒ Auto Track New Targets
  - 0.01 NM
- CPA Alerts:**
  - ☐ CPA Alerts
  - Range: 0.0 NM
  - CPA: 0.50 NM
  - TCPA: 15:00 mins
  - Mode: CPA + TCPA
- Zone Alarms:**
  - Mode: Mobile
  - Facility: Alarm2
- Ryokuseisha/Linemaster:**
  - ☒ Auto Track New Targets
  - ☒ Display Target Names
  - All Data

Buttons at the bottom: 1. Guard Zone, OK

‘Track Display Options’ – The whole vessel track can be displayed by ticking the ‘Show Whole Track’ box, or a specific time period by un-ticking the ‘Show Whole Track’ and selecting the required period.

### Targets

The ‘*Display Target Names*’ will display Target names in the Chart window if the names are available.

The ‘*Auto Track new Targets*’ option will enable tracking for any new Target objects that appear.

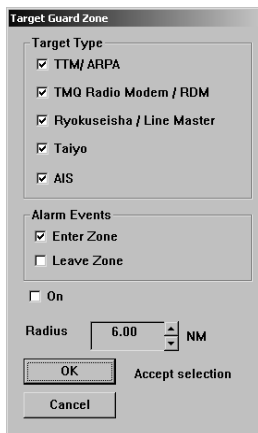
The ‘*Extended COG vector*’ will enable the COG vector to be extended to the edge of the screen, or to a CPA vector with the target off screen if a CPA alarm is activated.

The drop down list, provides the option of selecting how often a track point is displayed, it can be set to display all data received or by time or distance.

CPA Alerts – TMQ C-plot can be configured to Alert on any target that may be considered a danger to the System.

- **Range** is the range at which the CPA vector will be displayed on Screen.
- **CPA** The minimum range to your vessel where the alarm will sound.
- **TCPA** The time for a target to come within the CPA Range.
- **Mode Setting** Calculate CPA by either mode.

### 13.2.5.1 Guard Zone



The 'Target Guard Zone' dialog box contains the following sections:

- Target Type**
  - ☒ TTM/ARPA
  - ☒ TMQ Radio Modem / RDM
  - ☒ Ryokuseisha / Line Master
  - ☒ Taiyo
  - ☒ AIS
- Alarm Events**
  - ☒ Enter Zone
  - ☐ Leave Zone
- ☐ On
- Radius**: 6.00 NM
- Buttons**: OK, Cancel, Accept selection

‘Target Guard Zone’ - From this window the user can select which targets are required from the ‘Target Type’ section. Whether an alarm is required as the target enters or exits the zone, or both.

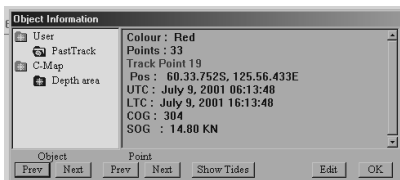
The ‘ON’ box allows the alarms to be easily switched on and off without having to adjust the alarm settings. It should be ticked if the alarms are required to be on.

Use the up/down arrows on the Radius box to set the radius for the Guard Zone.

## 13.3 Editing Target information

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

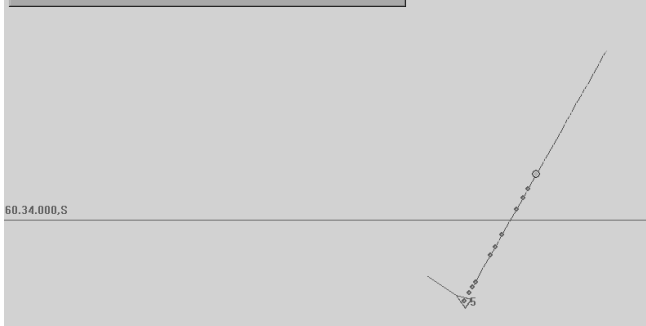
The Object Information box:



The 'Object Information' dialog box displays the following data:

- User**: FastTrack
- C-Map**: Depth area
- Colour**: Red
- Points**: 33
- Track Point**: 19
- Pos**: 60.33.752S, 125.56.433E
- UTC**: July 9, 2001 06:13:48
- LTC**: July 9, 2001 16:13:48
- COG**: 304
- SOG**: 14.00 KN

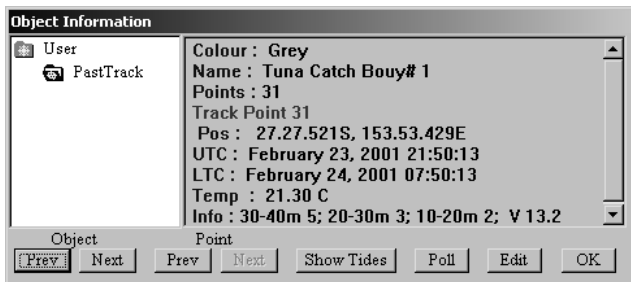
Buttons: Prev, Next, Show Times, Edit, OK



## 13.4 Ryokuseisha/Line Master Tuna Catch Buoys

Taiyo Ryokuseisha tuna catch buoys enable polling in addition to editing of track colour, name and comments similar any other target.

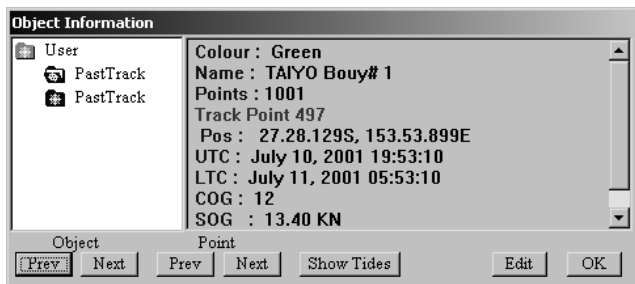
When the 'Object Information' box is invoked there is a 'Poll' button available, this sends a poll signal via the connected radio system to the Ryokuseisha buoy.



to

### 13.5 Taiyo Buoys

The object information box when queried for a buoy in question the object information box can be invoked.



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

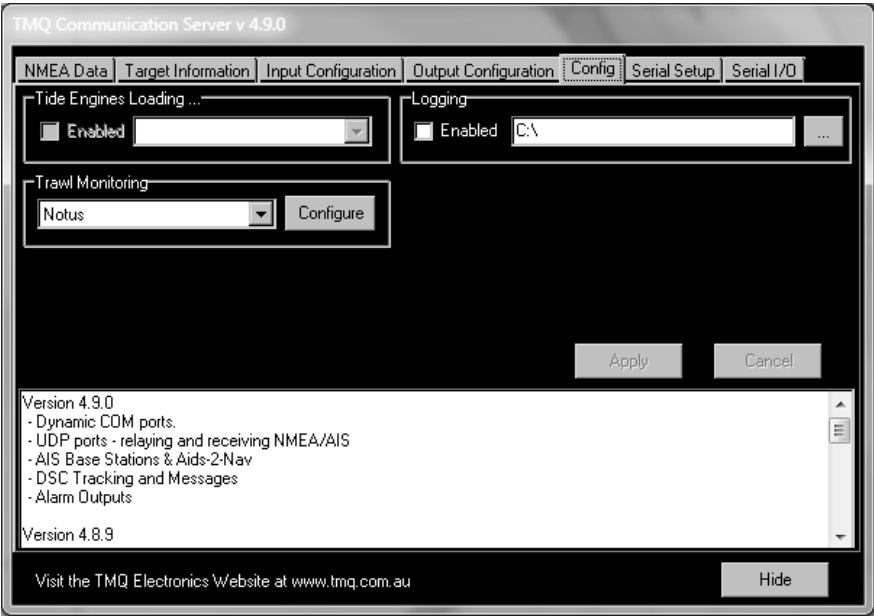
See section '11.1 The Object Information Box' for information on using the 'Object Information' dialogue box.

- **CPA** - CPA is the distance you will be from a Target vessel when you are nearest to it. The calculation is based on the current position, course and speed of your boat and each Target at the time of the last received position.
- **TCPA** - TCPA is the time (in minutes from now) at which your distance to the AIS vessel will be closest. The calculation is based on the current position, course and speed of your boat and the target at the time of the last received position. The TCPA will change when either vessel's course and speed are altered.

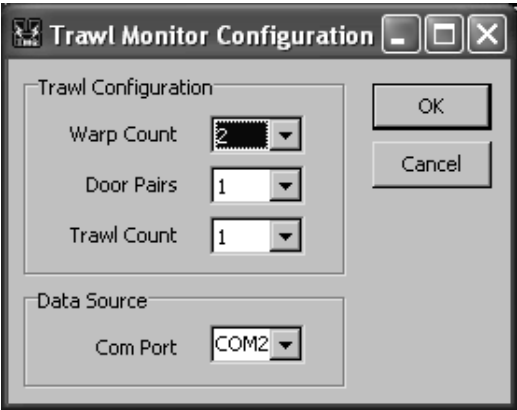
# 14.0 Notus Net Monitoring

The display of Notus Net Data in C-plot requires the use of the Notus net monitoring system being connected.

The C-plot system will display the location of nets on your chart screen when the data is available.



Configuring the system is done via the TMQ C COMS server.



Select the Net information of your Notus net system here. This will be configure to your system only.

# 15.0 Dead Reckoning Mode

If C-Plot should lose GPS input information an extended period of time, it will automatically switch to ‘Dead Reckoning’ mode. When C-Plot is in ‘Dead Reckoning’ mode the Position, Speed, and Course data fields in the ‘Ship position Data’ section of the chart display will be RED and the position field will include the letters ‘DR’ as shown below.

LAT 27.27.480,S DR	
LNG 153.06.450,E	
COG 331 T, 321 M	▲▼
SOG 0.00	▲▼
No Time Data	
NO Heading Data	

for

main  
data

While C-Plot is in this mode, any of the data fields shown in RED can be modified manually. The Course (COG) and Speed (SOG) data can be modified using the accompanying Up/Down arrows. Clicking on the Position data field will invoke a ‘Set New Position’ dialogue box, so that the position data can be modified.

Set New Position

27<sup>0</sup> 27.480' S

153<sup>0</sup> 06.450' E

OK

Cancel

To modify either the latitude or longitude data simply click on the first digit of either and type the new latitude/longitude. The TAB button can be used to step through the co-ordinate boxes. Click ‘OK’ to accept the new position or ‘Cancel’ to return to the normal chart display without changing the position of the vessel.



*C-Plot should not be used in Dead Reckoning mode for an extended length of time. The accuracy of the vessels position on the C-Plot main chart display is totally dependent on the accuracy of the inputted data. Any inaccuracies will cause C-Plot to display an erroneous vessel position. All steps should be taken to re-establish GPS input to the system.*

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