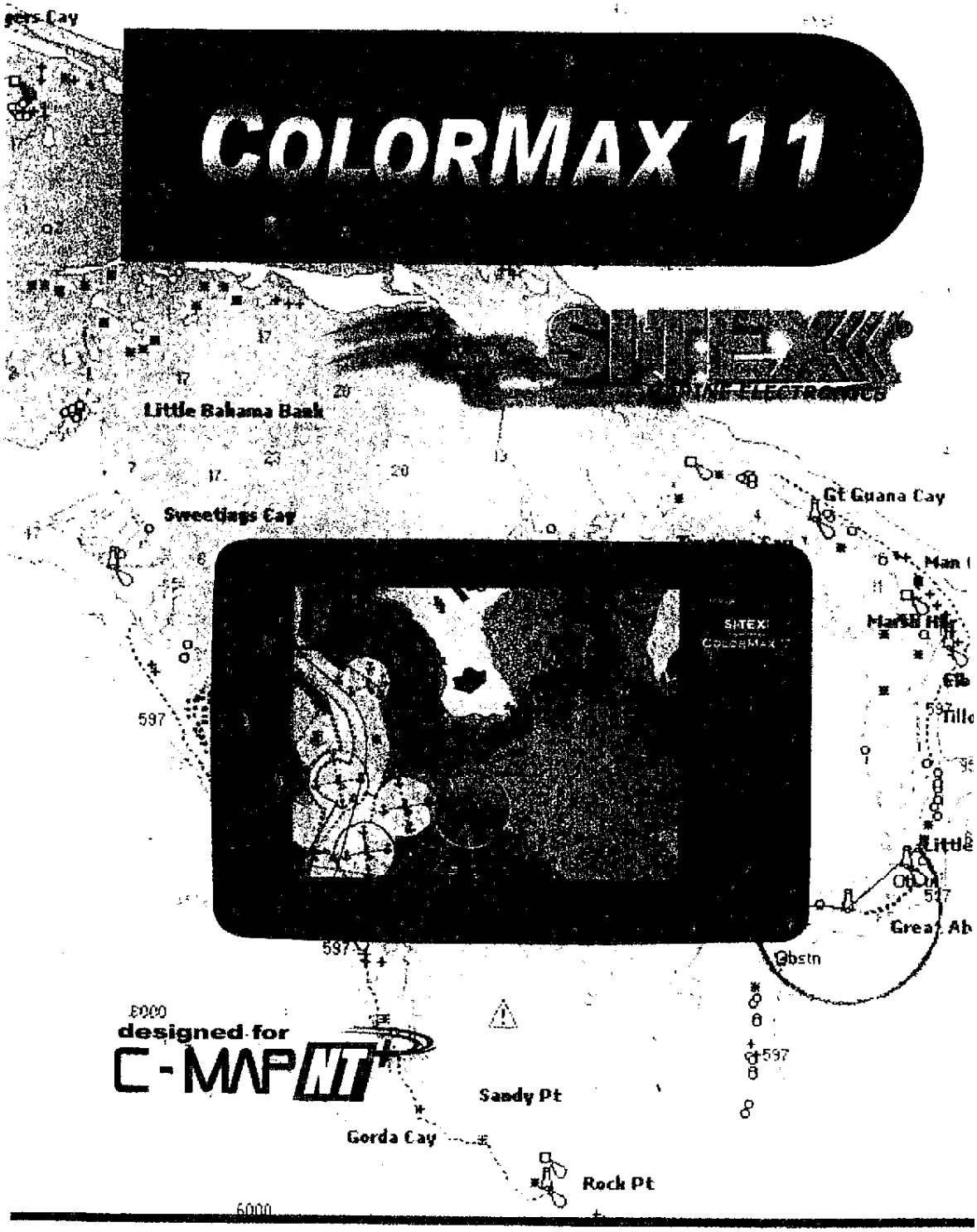
COLORMAX 11



User Manual

SI-TEX®

ColorMax 11

Sunlight Readable Display Color chartplotter with *Video* Input
CODE: XSegsw11c600B784/030203

User Manual

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Warning!

Electronic charts displayed by the chartplotter are believed to be accurate and reliable, but they are not intended to substitute for the official charts which should remain your main reference for all the matters related to the execution of a safe navigation.
For this reason we would like to remind you that you are required to carry on board and use the officially published and approved nautical charts.

Caution

- Please read through this manual before the first operation. If you have any questions, please contact the Company customer service or your local dealer.
- The chartplotter is not built water proof. Please give attention to avoid water intrusion into the chartplotter. Water damage is not covered by the warranty.
- Extensive exposure to heat may result in damage to the chartplotter.
- Connection to the power source with reversed polarity will damage the chartplotter severely. This damage may not be covered by the warranty.
- The chartplotter contains dangerous high voltage circuits which only experienced technicians can handle.
- The **C-MAP NT**+ C-CARD are available from your local dealer.
- We will not be liable for errors contained herein, or for incidental or consequential damages in connection with the performance or use of this material.
- Exposure of display to UV rays may shorten life of the liquid crystals used in your plotter. This limitation is due to the current technology of the LCD displays.
  Avoid overheating which may cause loss of contrast and, in extreme cases, a darkening of the screen. Problems which occur from overheating are reversible when temperature decreases.

Cleaning procedure for the plotter screen

Cleaning of the plotter screen is a very important operation and must be done carefully. Since the surface is covered by a antireflective coating, the procedure for cleaning all the surfaces can be performed using the following procedure: You need a tissue or lens tissue and a cleaning spray containing Isopropanol (a normal spray cleaner sold for the PC screen, for example PolaClear by Polaroid). Fold the tissue or lens tissue into a triangular shape, moisten the tip and use the index finger behind a corner to move the tissue across the surface, in overlapping side to side strokes. If the tissue is too wet, a noticeable wet film will be left in its path and you will need to repeat the process. If too dry, the tissue won't glide easily, and may damage the surface.

INTENTIONALLY OMITTED PAGES

4,16,32,74,94

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1
Introduction

Congratulations on your purchase of the ColorMax 11!

If you have not used a position-finding instrument before and intend to use your chartplotter for navigating, we suggest you should read this User Manual and make sure you are familiar with its contents.

The User Manual is divided into three main parts. Chapter "Before You Begin" introduces you to the basic information to get you start using the chartplotter. Chapter "For the New User" should be read first to become familiar with your new instrument. Chapter "For the Experienced User" introduces the advanced features of the chartplotter.

1.1 CONVENTIONS

Throughout this User Manual, the labelled keys are shown in capitals letters enclosed between single inverted commas, for example 'MENU'; the software keys are shown in small capitals letters enclosed between single inverted commas, for example 'Edit'.

Menu operations are in bold characters listed by keys sequence with the menu names enclosed between inverted commas, for example **'MENU' + "ADVANCED" + 'ENTER' + "FIX & COMPASS" + 'ENTER'** means: press the 'MENU' key, using the *Joystick* to select the ADVANCED menu and press 'ENTER' to go in it; then using the *Joystick* to select the FIX & COMPASS menu and press 'ENTER' to go in it.

Terms underlined, for example Target, are explained in the Appendix "Terms".

1.2 FEATURES

The chartplotter is a computer specifically designed for nautical use but, more precisely, to ease and speed up all calculations, which so far have been done manually. If connected to a positioning instrument, the chartplotter displays the current position, the speed,

and the heading of the boat and its Track. The user information like Waypoints, Marks and Tracks can then be stored on a User C-CARD and can be recalled at any time. On the screen are shown navigation data and cartographic information obtained from electronic charts of **C-MAP NT+** C-CARD.

When the package containing the chartplotter is first opened, please check it for the following contents (if any parts are missing contact the dealer the chartplotter was purchased from):

- External bracket and I/O cable 1,5 mt/5.9"
- Fuse 2 Amp. + fuseholder
- Chartplotter's protective cover
- Flush mounting kit
- Smart DGPS WAAS Receiver GPH00 with cable 15 mt/45 feet
- User Manual

C-MAP NT+ C-CARD (cartography data cards) are available through your local dealer. For additional information on C-MAP Cartography visit web site at www.c-map.com.

1.2.1 SPECIFICATIONS

1.2.1.1 MAIN CHARACTERISTICS

Recordable Individual points

- User Points : 1000
- Type of User Points : 16

Routes

- Routes : 50
- Max User Points per Route : 50

Tracking

- Tracks : 5
- Points per Track : 5000
- Step by Distance : 0.01, 0.05, 0.1, 0.5, 1, 2, 5, 10 Nm
- Step by Time : 1, 5, 10, 30 Sec, 1 Min

Cartographic Functions

- Worldwide Background
- Detailed Map by using **C-MAP NT+** C-CARD
- Coordinates System (ddd mm ss, ddd mm.mm, ddd mm.mmm, UTM, OSGB, TD)
- Map Datum
- Data Window mode
- Display Mode (Full, Simple, Fishing, Low, Custom)
- Marine

Names, Nav-Aids, Light Sectors, Attention Areas, Tides & Currents, Seabed Type, Ports & Services, Tracks & Routes, Underwater Objects

- Depth
  Depth Areas, Depth Areas Min/Max, Depth Lines & Sndgs, Depth Lines & Sndgs Min/Max
- Land
  Natural Features, Rivers & Lakes, Cultural Features, Landmarks
- Chart
  Lat/Lon Grid, Chart Boundaries, Cartography, Mixing Levels, Declutter

Fix Functions

- WAAS
- Fix Correction (manual and automatic)
- Position Filter
- Speed Filter
- Map Orientation (North, Course)
- Fix Datum
- Compass Calibration
- Bearings True and Magnetic
- Variation user selectable
- Static Navigation

Report Functions

- Depth Graph page
- Depth Graph Full page
- Navigation Data page (change the fields)
- 3D Road page (change the fields)
- GPS Status page
- GPS Data page
- Wind Data Page
- Wind Speed Page
- Wind Direction Page
- User Points List page
- About page

Special Functions

- Auto Info
- Find
  Port Services, Port Tide Stations, Wrecks, Obstructions, Cursor, Coordinates, User Points
- R/B Function
- Navigation to Destination

- Speed Unit (Mph, Kts, Kph)
- Distance Unit (Km, Nm, Sm)
- Depth Unit (Ft, FM, Mt)
- Altitude Unit (Ft, FL, Mt)
- Date & Time Setup (Local, UTC)
- Keypad Beep selection
- Alarms Handling
  Arrival Alarm, XTE Alarm, Anchor Alarm, Depth Alarm, Grounding Alarm, Grounding Depth Limit, Grounding Alarm Range, Grounding Alarm Report
- MOB Function
- Simulation
  Speed, Heading, Date, Time, Cursor Control, Simulation On/Off

Auxiliary Memory

- User C-CARD 1MB (about 52,000 Track point; 26,000 User Points available)

Interface

- Three I/O ports

1.2.1.2 PHYSICAL CHARACTERISTICS

Chartplotter size (inch/mm)

- 13"x 9.1"x 1.9" (329mm x 230.5mm x 47mm)

Chartplotter weight

- 1,6 Kg

LCD display

- Color : TFT transflective LCD *(active area 10.4")*
- Resolution : 640 x 480 pixels

Video Input

- PAL or NTSC video signals automatically selected

Power consumption

- Color : 1280mA max @ 12V
- Color with Camera connected: 1500mA max 12V

Power supply

- Color : 10 - 35 Volt dc, 15 Watt max
- Color with Camera connected: 10 - 35 Volt dc, 18 Watt max

Operating Temperature Range

- From 0°C to 55°C (from 32°F to 131°F)

Memory

- Non volatile with battery back-up

Keyboard

- Backlighted, silicon rubber

1.3 BASICS

The chartplotter is controlled by using fourteen keys. Ten keys are labelled and are dedicated to specific functions. The other four are software keys (hereinafter named soft keys) and have different functions when you select different modes of operation: their labels are shown on the screen immediately above the keys (the user can customize the function associated, see Par. 2.1.1). There is also a *Joystick* to move a cursor across the screen.

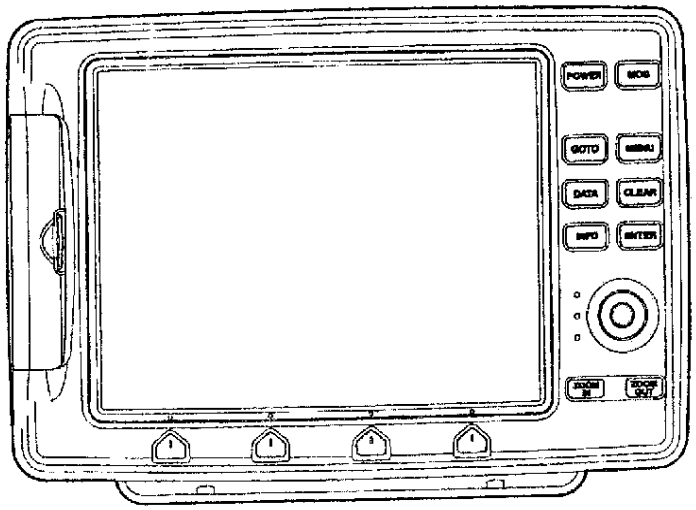

Fig. 1.3 - The chartplotter

As you press a key, a single audio beep confirms the key action; every time the key pressed is not valid, three rapid beeps sound indicates that no response is available. Note that it is possible to enable (On) or disable (Off) the keypad beep following the procedure:

➤ **'MENU' + "GENERAL" + 'ENTER' + "Keypad Beep" + 'ENTER'**

2
Before You Begin

This chapter provides basic information to get you start using the chartplotter; it will help you to become familiar with the chart display and the functions of the controls before you start using the chartplotter.

2.1 THE KEYBOARD

The [POWER] key

Press 'POWER' to turn the chartplotter On. Press and hold 'POWER' down (once the chartplotter has been turned On) for 3 seconds turns the chartplotter Off. Press and immediately release 'POWER' to adjust the backlight and contrast of the display.

The [MOB] key

Press 'MOB' to insert the MOB (Man OverBoard). Press 'MOB' when the MOB is already present deletes it.

The [CLEAR] key

Press 'CLEAR' to exit from menu or to leave a menu without making changes. If you are not into a menu, sets the Navigate mode (Home).

The [ENTER] key

Press 'ENTER' to select the preferred option, to confirm selection, to create Objects (Mark, Waypoint, R/B).

Note

Pressing 'ENTER' for 1 second or 'CLEAR' for 1 second activates respectly the Video Input 1 or the Video Input 2 (also it is possible to activate the Video Mode from menu, see Video Input menu in Par. 2.8). Once the Video Mode is active use the following keys to adjust video settings: press and immediately release 'POWER', use the 'CONTR+'/'CONTR-' and 'BRIGHT+'/'BRIGHT-' soft keys to adjust contrast and backlight; move the joystick up/down to adjust brightness and left/right to adjust colors, press 'ZOOM IN'/'ZOOM OUT' to adjust hue phase.

The [GOTO] key

Press 'GOTO' to select the Goto function.

The [DATA] key

Press 'DATA' to select the configuration you wish among cartography and text area, Depth Graph pages, GPS Data page, GPS Status Page, Navigation Data page, 3D Road Data page, Wind Data page, Wind Speed page, Wind Direction page.

Note

If in the Video Input menu the item Select Video Input is set to Video 1, Video 2 or Auto Switch, then the Video Input image can be selected by pressing 'DATA'. When Select Video Input is set to Video 1, the image shown is the one from Video Input 1; when Select Video Input is set to Video 2, the image shown is the one from Video Input 2; when Select Video Input is set to Auto Switch, the image will change alternatively between Video Input 1 and Video Input 2 (also it is possible to activate the Video Mode from menu, see Video Input menu in Par. 2.8). Once the Video Mode is active use the following keys to adjust video settings: press and immediately release 'POWER', use the 'CONTR+'/'CONTR-' and 'BRIGHT+'/ 'BRIGHT-' soft keys to adjust contrast and backlight; move the Joystick up/ down to adjust brightness and left/ right to adjust colors; press 'ZOOM IN'/'ZOOM OUT' to adjust hue phase.

The [INFO] key

Press 'INFO' to select Info function.

The [ZOOM IN] and [ZOOM OUT] keys

Press 'ZOOM IN' shows more details of a smaller area, by changing the chart scale and zooming in on your display. Press 'ZOOM OUT' to operate similarly to the 'ZOOM IN', except in reverse, changing the scale and showing a wider, otherwise less detailed view.

The [MENU] key

Press 'MENU' to select the FUNCTIONS Menu. When in Functions Menu, moving the *Joystick* to the right enters a selection, moving the *Joystick* to the left clears the function.

If pressing 'MENU' for 3 seconds from chart and data page allows to customize all data fields shown in the selected page.

The *Joystick*

The *Joystick* moves the cursor about on the display screen, quickly and accurately. It also scrolls the preferred option in the menu page(s).

If in Navigate (Home) mode, it allows to exit from navigate mode.

The soft key

The software keys (hereinafter named soft keys) can have different functions when you select different operations, for example info on cartographic objects, management of Marks and Waypoints... . Also they are used from the chart screen or from the data pages to select one of the data pages available to allow faster access to the page selection executable

from the Main Menu.

When the chart page is selected, the soft key labels are not shown. By pressing one of the four soft keys their labels for the current functions are shown on the screen immediately above the soft keys. When the soft key labels are shown, pressing the associated soft key the relative function is executed. Pressing 'CLEAR' the four soft key labels disappear.

2.1.1 SOFT KEYS CUSTOMIZATION

When the soft keys labels are shown the user can customize them. Pressing and holding down any of the four soft key shows a pop-up window on the top of the soft key pressed that contains all possible data pages assignable to the soft key pressed.

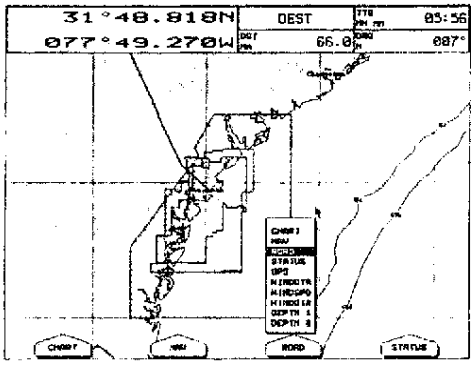

Fig. 2.1.1 - The soft keys labels customization

Move the *Joystick* up/down to place the selector on the preferred item; move the *Joystick* to the right or press 'ENTER' to set the selected item; move the *Joystick* to the left or press 'CLEAR' to close the pop-up window. The possible choices are:

CHART	'CHART'	(Chart and data page, see Par. 3.1.1)
NAVIGATION	'NAV'	(Navigation Data page, see Par. 3.1.3)
3D ROAD	'ROAD'	(3D Road page, see Par. 3.1.4)
GPS STATUS	'STATUS'	(GPS Status page, see Par. 3.1.5)
GPS DATA	'GPS'	(GPS Data page, see Par. 3.1.6)
WIND DATA	'WINDDTA'	(Wind Data page, see Par. 3.1.7)
WIND SPEED	'WINDSPD'	(Wind Speed page, see Par. 3.1.8)
WIND DIRECTION	'WINDDIR'	(Wind Direction page, see Par. 3.1.9)
DEPTH	'DEPTH 1'	(Depth page, see Par. 3.1.2)
DEPTH FULL	'DEPTH 2'	(Depth Full page, see Par. 3.1.2)

The default settings for the soft keys labels are: 'CHART', 'NAV', 'ROAD', 'STATUS'.

Note

It is possible to set the Video Input with any of the four soft keys. Pressing one of the soft keys, the soft keys labels are shown. Pressing and holding for 1 second one of the soft keys, the soft keys customization

list will be shown. By selecting Video Input option it is possible to assign the soft key to execute the Video Input function. Once the soft key has been associated to video input, its label shows the message 'VIDEO'. If 'VIDEO' is pressed, the soft keys are be assigned this way: Video 1, Video 2, Switch. If no video signal was detected on the Video Input connectors, the three soft keys are grayed out in order to identify that they are not active. If only one video signal is detected on the Video Input connectors, the corrisponding soft key is shown with dark color and the other soft keys are shown with light color. (Note that it is possible to activate the Video Mode from menu, see Video Input menu in Par. 2.8). Once the Video Mode is active use the following keys to adjust video settings: press and immediately release 'POWER', use the 'CONTR+'/ 'CONTR-' and 'BRIGHT+'/'BRIGHT-' soft keys to adjust contrast and backlight; move the Joystick up/ down to adjust brightness and left/ right to adjust colors; press 'ZOOM IN'/ ZOOM OUT' to adjust hue phase.

WARNING

The following figures on this User Manual could not display the default soft keys labels.

2.2 TURNING THE CHARTPLOTTER ON AND OFF

Before powering On the chartplotter, check for the correct voltage (10-35 volt dc) and the correct connections with the positioning instrument:

POWER & I/O CONNECTOR		
PIN #	CABLE WIRE COLOR	FUNCTION
1	BLACK	GND/COMMON
2	RED	+10-35 Vdc

Fig. 2.2 - Power On

2.2.1 TURNING ON

Press and hold 'POWER' for 1 second. The chartplotter emits one rapid beep sound, and a title page is opened:

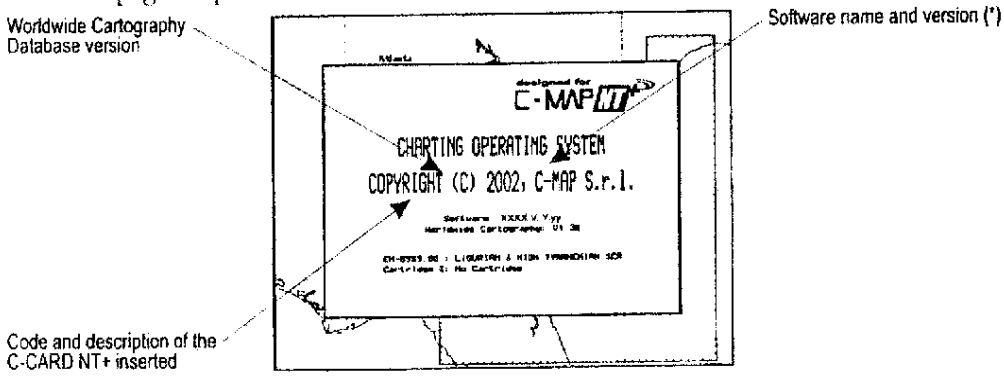

Fig. 2.2.1 - Title page

Note (*)

The software version is subject to change without notice. This User Manual is valid anyway.

After a few seconds, the first of the two Caution Notice pages is displayed, reminding you the chartplotter is only an aid to navigation and should be used with appropriate prudence. The electronic charts are not intended to substitute for the official charts. Then the cartographic screen is displayed.

2.2.2 TURNING OFF

Press 'POWER' and hold for 3 seconds: a countdown timer appears on the screen, if you release the key before the countdown timer reaches zero, the chartplotter will remain On.

2.3 CHANGING BACKLIGHT AND CONTRAST

Press and immediately release 'POWER' (do not press and hold the key, or the "power-off" message will be displayed!). Two sliders appear on the screen, showing the current settings for backlight and contrast.

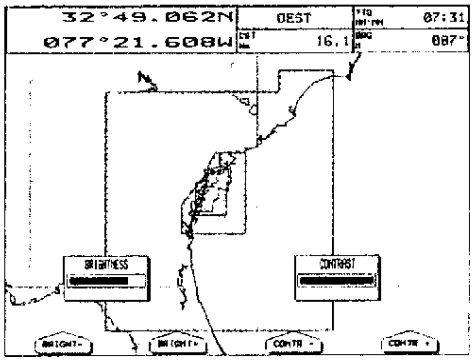

Fig. 2.3 - Brightness and Contrast control

The screen backlight can be controlled using the soft key 'BRIGHT -' and 'BRIGHT +': adjust the backlight to the required level; the backlight changes as you adjust the slider. Press 'ENTER' to confirm the new setting (this operation also clears the soft key and the graphical display). Alternately, you can press 'CLEAR' to exit without making any changes.

To change the contrast operate in the same mode, using 'CONTR -' and 'CONTR +'.

The new backlight and contrast levels are retained until you reset them or turn Off the chartplotter.

WARNING !!!
At very low temperatures the CCFL backlight may not glow properly. Allow a few minutes for it to warm up.

2.4 SELECTING THE LANGUAGE

It is possible to select the language in which you wish information to be displayed (for screen labels, menus and options, but it is not affect the map information). The default setting is English.

➤ **'MENU' + "GENERAL" + 'ENTER' + "Language" + 'ENTER'**
Choose the language you prefer and press 'ENTER' to confirm.

2.5 EXTERNAL CONNECTIONS

2.5.1 GPS CONNECTIONS

To connect the GPS to the serial Port 1 see the following picture:

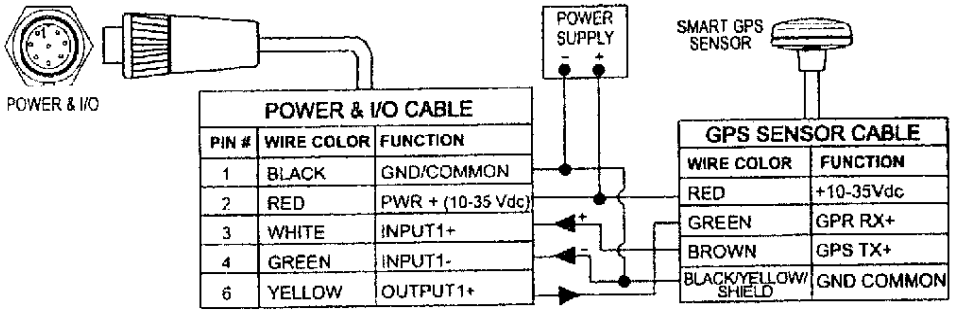

Fig. 2.5 1 - GPS Connection on Port 1

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

If you are connecting the model Smart DGPS WAAS Receiver GPH00, select:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER' + "NMEA-4800-N81-N" + 'ENTER'**

Otherwise to connect the GPS to the serial Port 2 see the following picture:

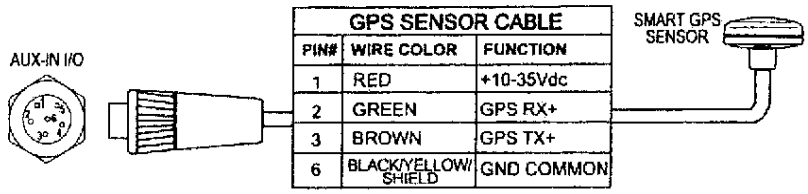

Fig. 2.5.1a - GPS Connections on Port 2

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 2 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

If you are connecting the model Smart DGPS WAAS Receiver GPH00, select:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 2 Input" + 'ENTER' + "NMEA-4800-N81-N" + 'ENTER'**

To connect the GPS to the serial Port 3 see the following picture:

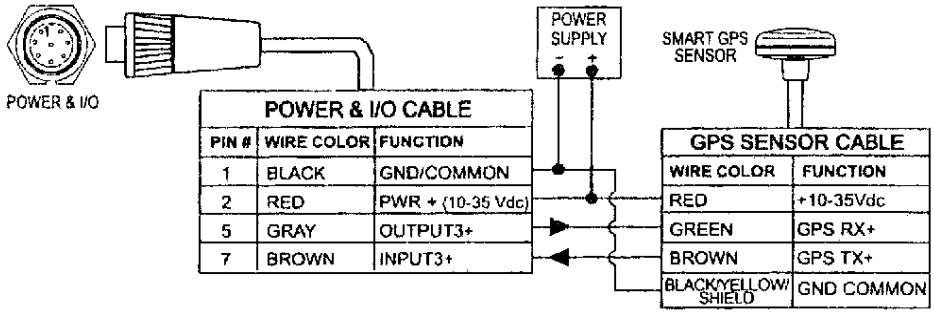

Fig. 2.5.1b - GPS Connections on Port 3

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 3 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

If you are connecting the model Smart DGPS WAAS Receiver GPH00, select:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 3 Input" + 'ENTER' + "NMEA-4800-N81-N" + 'ENTER'**

2.5.2 AUTOPILOT CONNECTIONS

To connect the Autopilot to the serial Port 1 see the following picture:

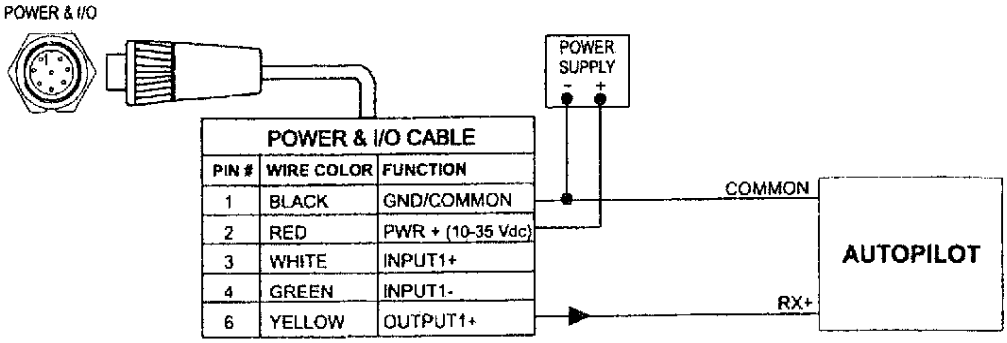

Fig. 2.5.2 - Autopilot Connections on Port 1

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Output" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 0183 4800-N81-N, NMEA 0180, NMEA 0180/CDX (the default setting is NMEA 0183 4800-N81-N) and press 'ENTER' to confirm.

To connect the Autopilot to the serial Port 2 see the following picture:

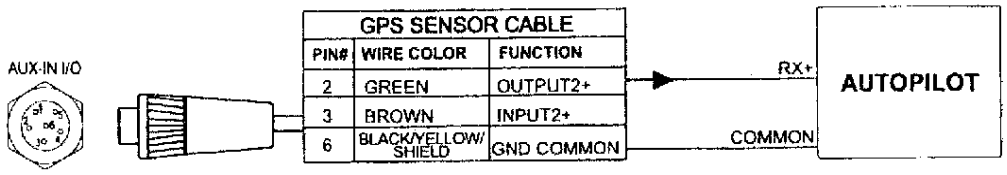

Fig. 2.5.2a - Autopilot Connections on Port 2

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 2 Output" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 0183 4800-N81-N, NMEA 0180, NMEA 0180/CDX (the default setting is NMEA 0183 4800-N81-N) and press 'ENTER' to confirm.

To connect the Autopilot to the serial Port 3 see the following picture:

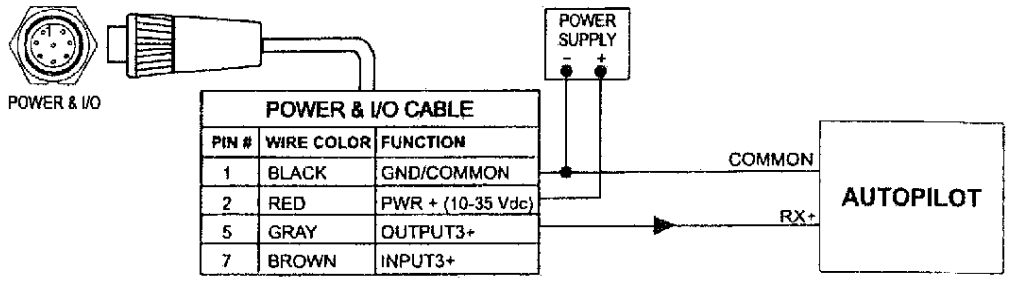

Fig. 2.5.2b - Autopilot Connections on Port 3

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 3 Output" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 0183 4800-N81-N, NMEA 0180, NMEA 0180/CDX (the default setting is NMEA 0183 4800-N81-N) and press 'ENTER' to confirm.

2.5.3 EXTERNAL NMEA CONNECTIONS

To connect the External NMEA to the serial Port 1 see the following picture:

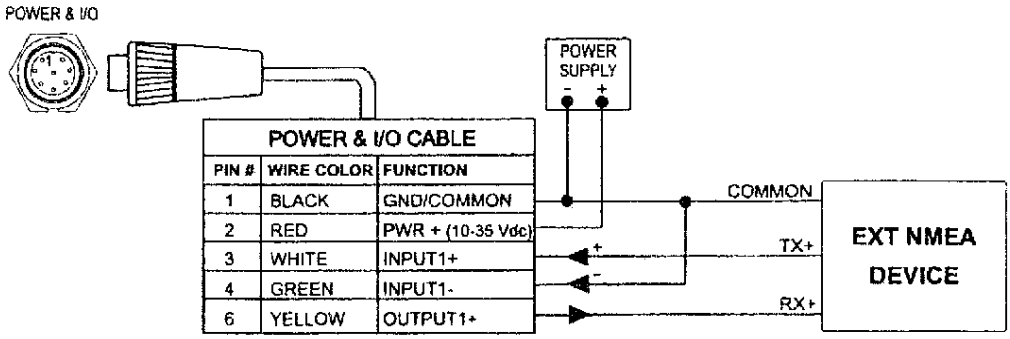

Fig. 2.5.3 - External NMEA Connections on Port 1

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

To connect the External NMEA to the serial Port 2 see the following picture:

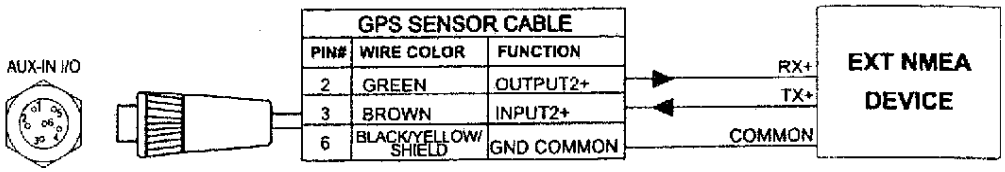

Fig. 2.5.3a - External NMEA Connections on Port 2

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 2 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

To connect the External NMEA to the serial Port 3 see the following picture:

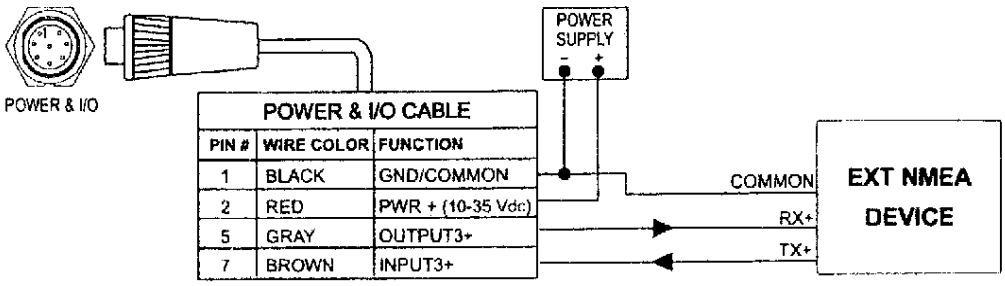

Fig. 2.5.3b - External NMEA Connections on Port 3

To choose your preferred setting follow the procedure:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 3 Input" + 'ENTER'**

Then choose your preferred setting among the NMEA available settings NMEA 1200-N81-N, NMEA 4800-N81-N, NMEA 4800-N82-N, NMEA 9600-O81-N, NMEA 9600-N81-N (the default setting is 4800-N81-N) and press 'ENTER' to confirm.

2.5.4 C-COM CONNECTIONS

The option C-COM defines on which Port the C-COM modem is connected. It is important to remark that this setting affects the Input and the Output of the selected Port. The C-COM can only be set on one Port at time. If the C-COM was already assigned to one Port and the user tries to set the C-COM to another Port, the chart plotter will show a message that warns the user about the current settings and asks if the new settings should overwrite the previous ones.

To connect the C-COM to the serial Port 1 see the following picture:

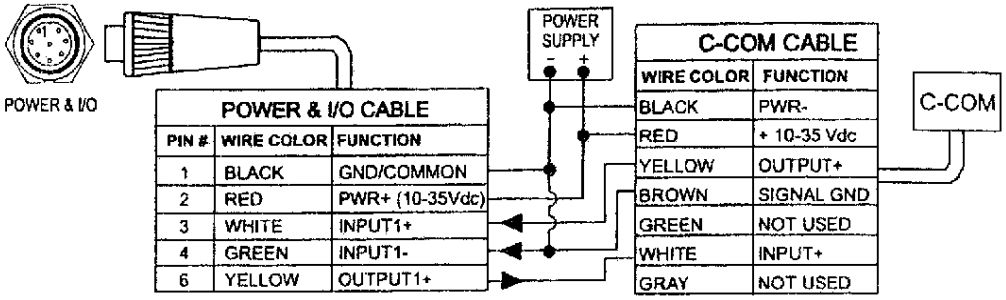

Fig. 2.5.4 - C-COM Connections on Port 1

Then choose your setting from menu:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER' + "C-COM" + 'ENTER'**

To connect the C-COM to the serial Port 2 see the following picture:

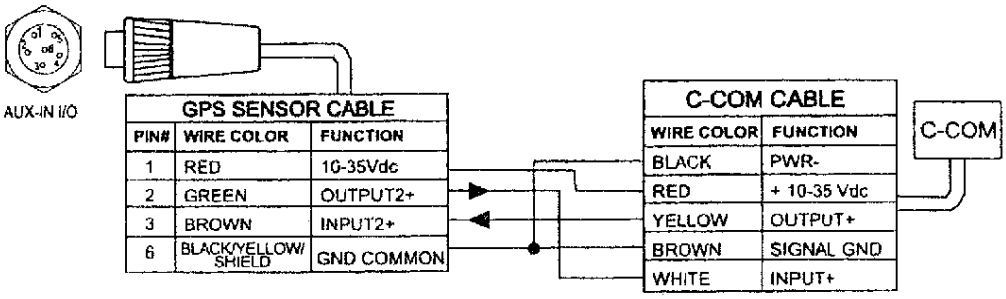

Fig. 2.5.4a - C-COM Connections on Port 2

Then choose your setting from menu:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 2 Input" + 'ENTER' + "C-COM" + 'ENTER'**

To connect the C-COM to the serial Port 3 see the following picture:

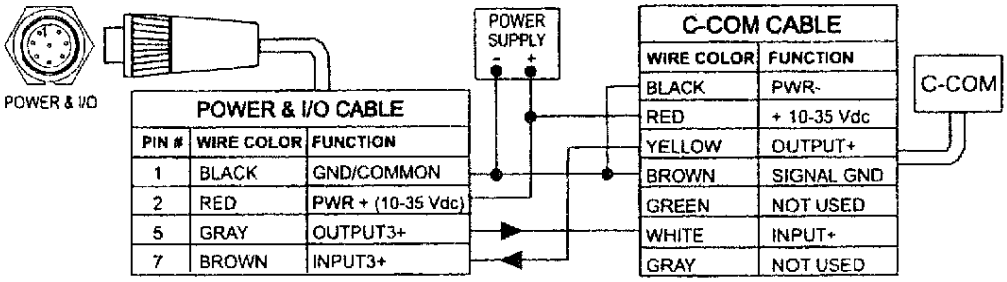

Fig. 2.5.4b - C-COM Connections on Port 3

Then choose your setting from menu:

➤ **'MENU' + "ADVANCED" + 'ENTER' + "INPUT/OUTPUT" + 'ENTER' + "Port 3 Input" + 'ENTER' + "C-COM" + 'ENTER'**

2.5.5 EXTERNAL ALARM CONNECTION

To connect the External Alarm device see the following picture:

POWER & I/O CONNECTOR		
PIN #	WIRE COLOR	FUNCTION
1	BLACK	GND/COMMON
2	RED	PWR + (10-35 Vdc)
8	BLUE	EXTERNAL ALARM OUTPUT+ (OPEN COLLECTOR)

Fig. 2.5.5 - External Alarm Connection

Once the connection is active, to enable the External Alarm follow the procedure:

➤ **'MENU' + "ALARMS" + 'ENTER' + "External Alarm" + 'ENTER' + "ON" + 'ENTER'**

2.6 ADDITIONAL C-CARDS

The chartplotter uses two types of C-MAP cartridges: either a chart cartridge or a data storage cartridge. A chart cartridge, called C-CARD, contains detailed charts of the area covered. A data storage cartridge, called User C-CARD can be used to permanently store your Routes, Waypoints, Marks, Events and Tracks (see Par. 4.6).

2.6.1 INSERTING C-CARD

Hold the C-CARD by the short inclined side so that you can see the C-MAP label.

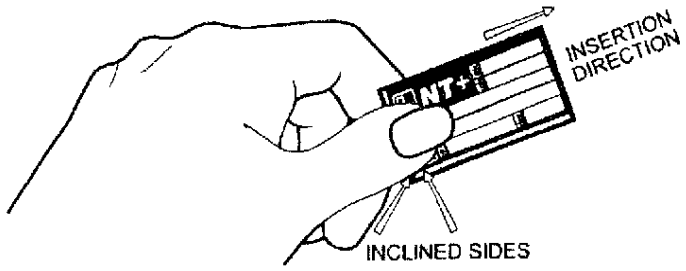

Fig. 2.6.1 - Inserting C-CARD (1)

Open the door (see left side of Fig. 2.6.1a), gently push the C-CARD into one of the two slots; push the C-CARD in as far as it will go, then close the door to hold fixed into the slot.

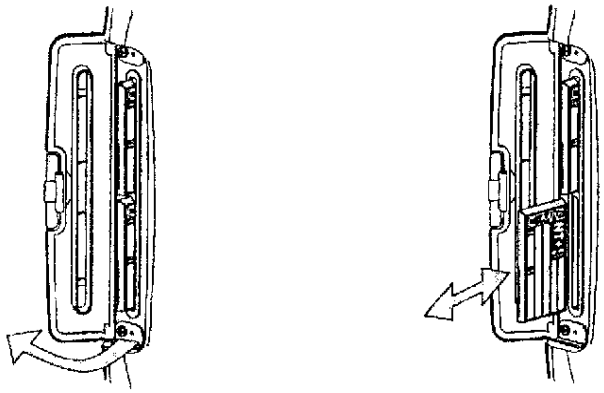

Fig. 2.6.1a - Inserting C-CARD (II)

2.6.2 REMOVING C-CARD

Open the door and remove the C-CARD out of one of the two slots (as shown in the right side of the previous Fig. 2.6.1a).

Note

C-MAP is continuously creating new charts and revising old ones. If you wish to receive information on the newest availbale charts, you can write for the catalog of available **C-MAP NT+** *C-CARD at your dealer.*

2.7 VIDEO INPUT

By accessing this menu it is possible to see images on the chartplotter display captured from an external video signal source, if connected to the chartplotter. Not all color chartplotters are connectable to the external video signal. Please make sure that your chartplotter is equipped with a video input connection port.

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER'**

2.7.1 SELECT VIDEO INPUT

Selects the preferred Video Input, among None, Video 1, Video 2 or Auto Switch. If Auto Switch is selected, choose the switching time.

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER' + "Select Video Input" + 'ENTER'**

2.7.2 ACTIVATE VIDEO INPUT

Activate Video Input from menu :

- **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER' + "Activate Video Input" + 'ENTER'**

Activates the Video Mode from the Video Input menu (also it is possible to activate Video Mode by pressing 'CLEAR' for 3 seconds). At the activation of the Video Mode the following messages are shown on a dedicated window: "Connnected Video Input Signal is XXXX. The Video Mode will be activated". XXXX can be PAL or NTSC: the software automatically detects the type of Video Input source connected. Once the Video Mode is active use the following keys to adjust video settings: press and immediately release 'POWER' , use the 'CONTR+'/'CONTR-' and 'BRIGHT+'/'BRIGHT-' soft keys to adjust contrast and back-light; move the cursor up/down to adjust brightness and left/right to adjust colors, press 'ZOOM IN'/ZOMM OUT' to adjust hue phase. Pressing any other key exits from Video Mode.

2.7.2.1 Quick Activation

Pressing 'ENTER' for 1 second activates Video Input 1 and pressing 'CLEAR' for 1 second activates Video Input 2.

2.7.2.2 Video Input Display by Page selection

If in the Video Input menu the item Select Video Input is set to Video 1, Video 2 or Auto Switch, it is possible pressing 'PAGE' select respectively the display image shown from Video Input 1, from Video Input 2 or alternatively between Video Input 1 or from Video Input 2.

2.7.2.3 Video Input activation by soft keys

It is possible to set the Video Input with any of the four soft keys. Pressing one of the soft keys, the soft keys labels are shown. Pressing and holding for 1 second one of the soft keys, the soft keys customization list will be shown. By selecting Video Input option it is possible to assign the soft key to execute the Video Input function. Once the soft key has been associated to video input, its label shows the message 'VIDEO'. If 'VIDEO' is pressed, the soft keys are be assigned this way: Video 1, Video 2, Switch. If no video signal was detected on the Video Input connectors, the three soft keys are grayed out in order to identify that they are not active. If only one video signal is detected on the Video Input connectors, the corrisponding soft key is shown with dark color and the other soft keys are shown with light color..

2.7.3 SWITCHING TIMEOUT

Select the timeout for the Auto Switch option among 5, 10, 30 seconds, 1, 5, 10 minutes.

- **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER' + "Switching Timeout" + 'ENTER'**

2.7.4 RESTORE DEFAULTS

Restores default values of Contrast, Brightness, Backlight, color saturation and Hue phase.

- **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER' + "Restore Defaults" + 'ENTER'**

After pressing 'ENTER' on the screen a window is shown containing three options: Video 1, Video 2, All. If Video 1 or Video 2 is selected, their relative settings are set to the default values and the message "OK" is shown to the selected item. If the option All is selected, both the settings for Video 1 and Video 2 are restored to the default values and the message "OK" is shown next to Video 1, Video 2 and All.

2.8 MENU OPTIONS

You may select how the chartplotter displays primary information (such as how time is displayed) from the Functions Menu.

- **'MENU'**

2.9 DATA ENTRY

Information is keyed into the chartplotter when editing a Waypoint, entering a Route or using the Fix Correction functions. When the field is highlighted:

- Enter or edit data by pressing up/down *Joystick* to step through the available characters until the preferred character is displayed.
- Press right *Joystick* to move the cursor to the right.
- Use left *Joystick* to move the cursor to the left.

3
For the New User

In order to get started using your chartplotter, you must do the following things:

1) Your chartplotter must have been installed properly according to the installation instruction on Par. 6.2.

2) You must have performed the proper settings for use with your positioning instrument (see Par. 2.5) and inserting the C-CARD for navigating in area you wish (see Par. 2.6).

3) You must have turned on the chartplotter and adjust the brightness and contrast of the display (see Par. 2.2 and 2.3).

Once this is done, you can use your chartplotter for navigation.

3.1 SCREEN DISPLAY CONFIGURATION

The screen display can be shown in different modes: Chart page, Depth Graph pages, Navigation Data page, 3D Road Data page, GPS Data page, GPS Status page, Wind Data page, Wind Speed page, Wind Direction page. See the following paragraphs.

3.1.1 CHART DISPLAY

It is very important to access the information you need as you need it and understand what is displayed on the screen.

- **'DATA' + "CHART DISPLAY" + 'ENTER'**

or

- **press any soft keys + 'CHART' (if it is present)**

Shows the chart display and Text Area (if selected). With the following procedure:

- **'MENU' + "DISPLAY" + 'ENTER' + "Data Window Mode" + 'ENTER'**

it is possible to customize the Text Area layout among Full Screen, Text Area with 5 boxes and Text Area with 8 boxes.

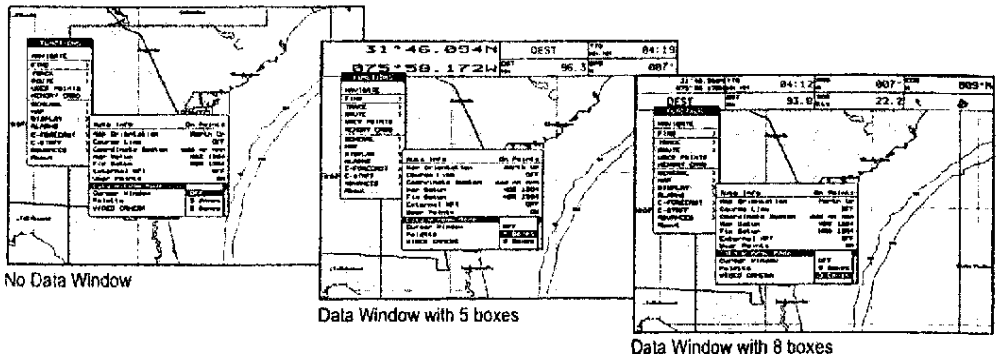

Fig. 3.1.1 - Text Area layout

It is also possible to edit fields shown in every screen configuration. Edit mode is activated directly from the chart display pressing 'MENU' for 3 seconds.
Once the Edit mode is active, the first box with the label turns in reverse video screen. The user can choose the active box by moving the *Joystick* left or right. Pressing 'ENTER' the user can choose the data to be shown on the selected field by moving through the selections and pressing 'ENTER' again.

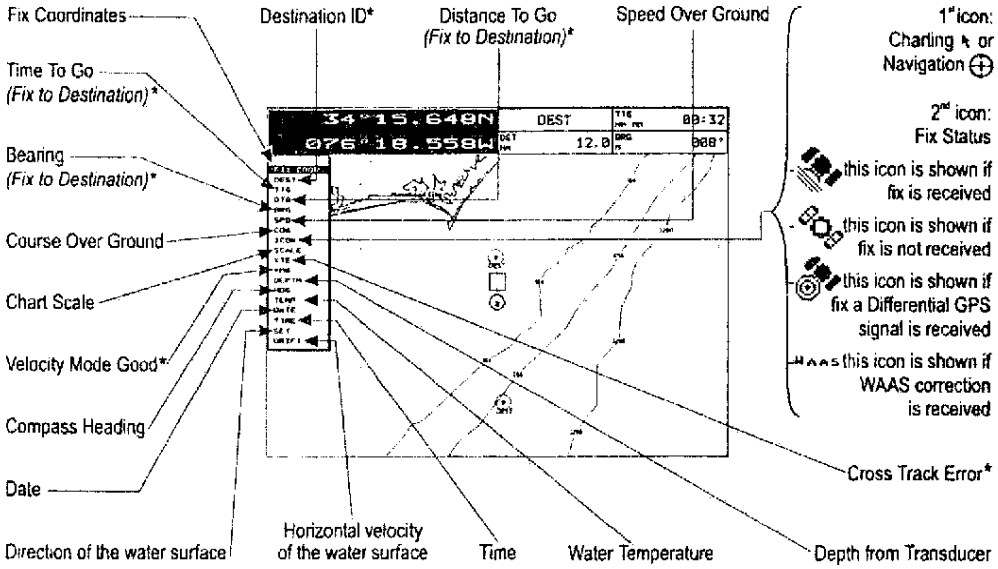

Fig. 3.1.1a - Edit mode

Note
(*) It will be shown only if the Destination is present.

Once 'ENTER' is pressed the data type is set. The selection window is closed and the Text Area changes according to the selected data type. Press 'CLEAR' to exit the Edit mode.

Note

The Display Menu can be selected only from the Chart Display page and the Depth Graph page in split mode.

3.1.2 DEPTH GRAPH PAGES

The Depth graph can be shown in two different modes. To select the Depth Graph in split mode:

- 'DATA' + "DEPTH GRAPH" + 'ENTER'

or

- press any soft keys + 'DEPTH 1' (if it is present)

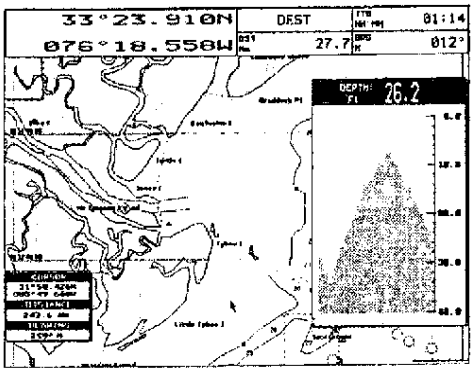

Fig. 3.1.2 - The Depth Graph in split mode

Otherwise selecting the Depth graph displayed at full screen:

- 'DATA' + "DEPTH GRAPH FULL" + 'ENTER'

or

- press any soft keys + 'DEPTH 2' (if it is present)

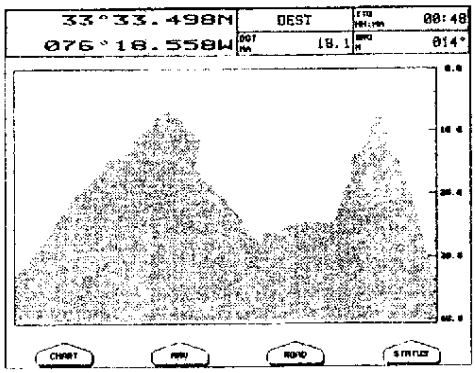

Fig. 3.1.2a - The Depth Graph Full

3.1.3 NAVIGATION DATA PAGE

The Navigation Data page shows information about the most relevant navigation

information, the status of the received signal and ship's coordinates. It is possible to customize the information contained in the page selecting the Nav Display menu (see Par. 5.2).

➤ 'DATA' + "NAVIGATION DATA" + 'ENTER'

or

➤ press any soft keys + 'NAV' (if it is present)

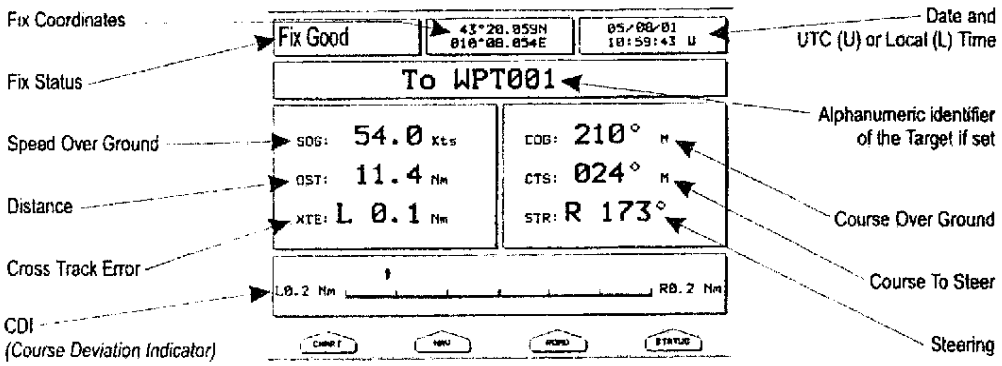

Fig. 3.1.3 - Navigation Data Page

3.1.4 3D ROAD PAGE

The 3D Road Data Page shows in graphic mode navigation data. It is possible to customize the information contained in the page selecting the Nav Display menu (see Par. 5.2).

➤ 'DATA' + "3D ROAD" + 'ENTER'

or

➤ press any soft keys + 'ROAD' (if it is present)

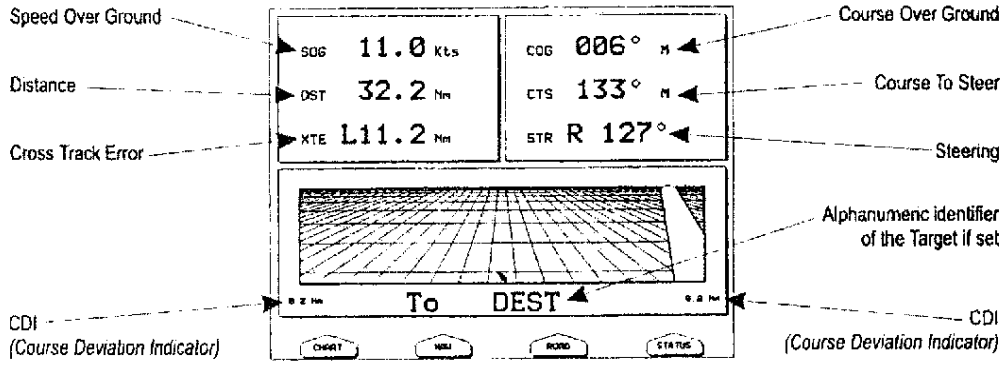

Fig. 3.1.4 - 3D Road Data Page

3.1.5 GPS STATUS PAGE

The GPS Status page shows in graphic mode GPS data.

➤ 'DATA' + "GPS STATUS" + 'ENTER'

or

➤ press any soft keys + 'STATUS' (if it is present)

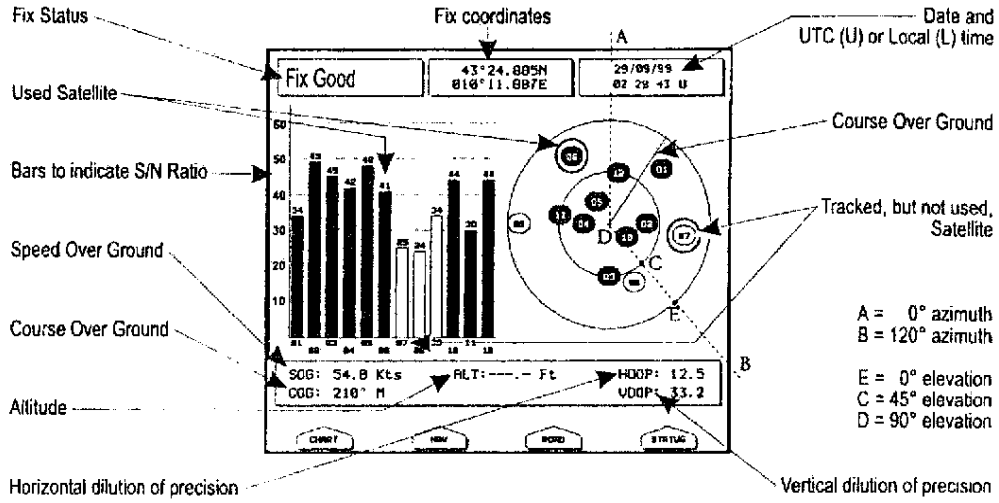

Fig. 3.1.5 - GPS Status Page

On the right side of the screen (see Fig. 3.1.5), there is a polar representation of the azimuth and elevation of each satellites. The circles contain a number indicating the PRN of the satellite and they are filled when they are used for the fix solution. On the left side there are histograms indicating the S/N ratio (SNR). The bar is filled when the satellite is used for fix solution. As example, the satellite with PRN=10 is used for fix solution with S/N=44, Azimuth=119degree and Elevation=70degree. When a valid fix is received, the Lat/Lon, Date, Time, HDOP, VDOP, ALT, COG, SOG are shown in the page.

3.1.6 GPS DATA PAGE

The GPS Data page shows the GPS data.

➤ 'DATA' + "GPS DATA" + 'ENTER'

or

➤ press any soft keys + 'GPS' (if it is present)

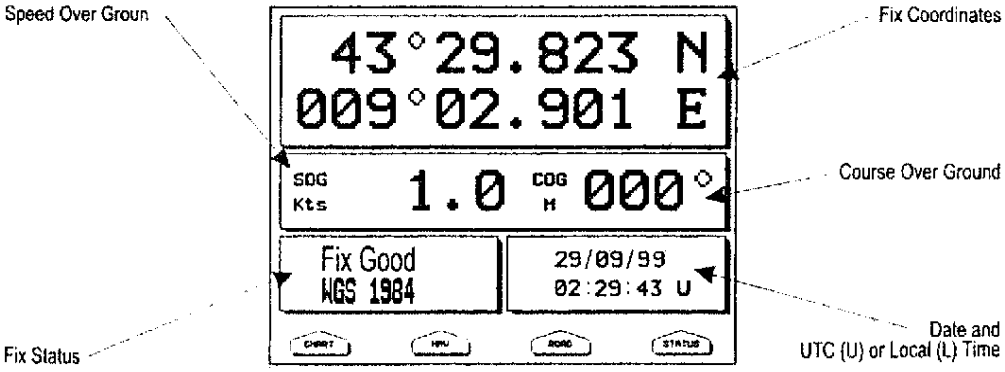

Fig. 3.1.6 - GPS Data Page

3.1.7 WIND DATA PAGE

The Wind Data Page shows data related to the wind.

- 'DATA' + "WIND DATA" + 'ENTER'

or

- press any soft keys + 'WINDDTA' (if it is present)

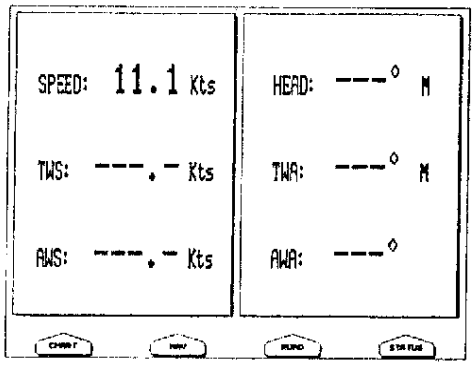

Fig. 3.1.7 - Wind Data Page

3.1.8 WIND SPEED PAGE

The Wind Speed page shows the True Wind Speed & Time Graph.

- 'DATA' + "WIND SPEED" + 'ENTER'

or

- press any soft keys + 'WINDSPD' (if it is present)

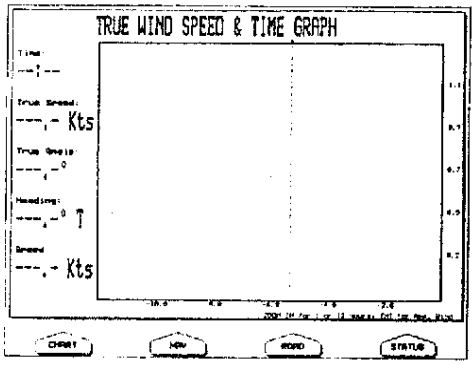

Fig. 3.1.8 - Wind Speed Page

3.1.9 WIND DIRECTION PAGE

The Wind Direction page shows the True Wind Direction & Time Graph.

- 'DATA' + "WIND DIRECTION" + 'ENTER'

or

- press any soft keys + 'WINDDIR' (if it is present)

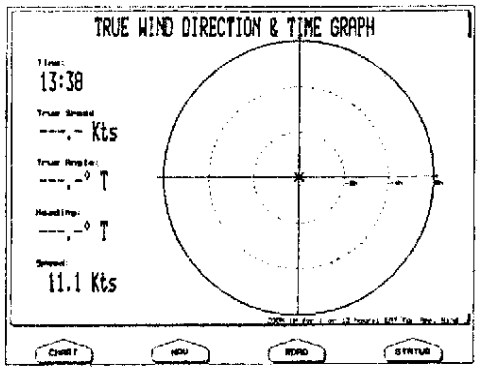

Fig. 3.1.9 - Wind Direction Page

3.2 GENERAL MENU

The General Menu provides access to the set up functions. Here you can choose the language you want (see Par. 2.4), the measure units, the date and time settings, enable or disable the Keypad Beep (see Par. 1.2) and select the Cursor Speed.

➤ **'MENU' + "GENERAL" + 'ENTER'**

3.2.1 UNITS SELECTION

Allows to select the preferred unit for Distance, Speed, Depth and Altitude (altitude of GPS Antenna on the medium sea level).

Distance & Speed Units: Nm(Nautical Miles) & Kts(knots) / Sm(statute miles) & Mph(miles per hour) /Km(chilometres) & Kph(chilometres per hour). The default setting is Nm & Kts.

➤ **'MENU' + "GENERAL" + 'ENTER' + "Dist&Speed Units" + 'ENTER'**

Depth Unit: Ft(Feet)/FM(Fathoms)/Mt(Meters). The default setting is Ft.

➤ **'MENU' + "GENERAL" + 'ENTER' + "Depth Unit" + 'ENTER'**

Altitude Unit: Ft(Feet)/FL(Flight Level)/Mt(Meters). The default setting is Ft.

➤ **'MENU' + "GENERAL" + 'ENTER' + "Altitude Unit" + 'ENTER'**

3.2.2 TIME & DATE SETTING

Allows to select the preferred time and date.

Time Reference: Sets UTC or Local Time. The default setting is UTC.

- 'MENU' + "GENERAL" + 'ENTER' + "Time Reference" + 'ENTER'

Time Format: Sets you preferred time between 12 hour and 24 hour. The default setting is 24 hour.

- 'MENU' + "GENERAL" + 'ENTER' + "Time Format" + 'ENTER'

Date Format: Sets you preferred date between MM-DD-YY (month-day-year) and DD-MM-YY (day-month-year). The default setting is MM-DD-YY.

- 'MENU' + "GENERAL" + 'ENTER' + "Date Format" + 'ENTER'

3.2.3 CURSOR SPEED

Allows to select the preferred Cursor Speed among Low, Medium and High in Chart or into a Menu:

- 'MENU' + "GENERAL" + 'ENTER' + "Cursor Speed" + 'ENTER'

3.3 NAVIGATING TO A SINGLE DESTINATION

3.3.1 DISTANCE AND BEARING TO TARGET

Once you have positioned the cursor on your preferred location press 'GOTO'.

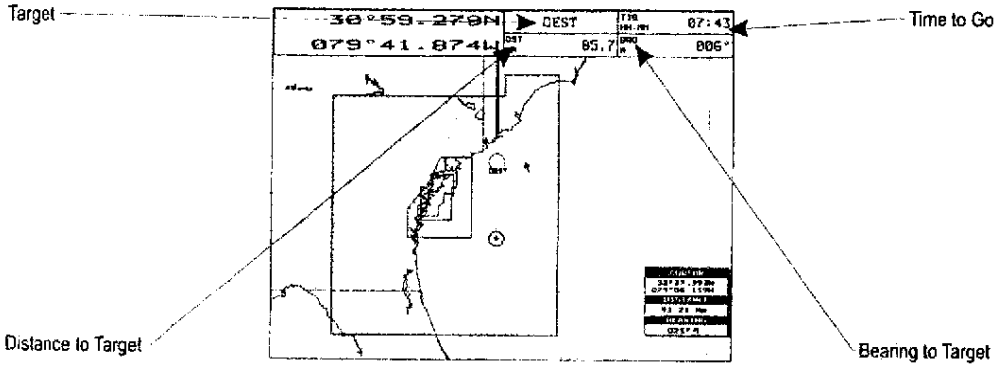

Fig. 3.3.1 - Navigation to a single destination

On the screen is shown a dotted line connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

3.3.2 TIME TO GO

When the Target is set the TTG value can be displayed in the Text Area (see Par. 3.1.1). Otherwise select the 3D Road Page (see Par. 3.1.4) where you can readTTG value:

- **'DATA' + "3D ROAD" + 'ENTER'**

or

- **press any soft keys + 'ROAD' (if it is present)**

3.3.3 DELETING TARGET

Place cursor on Target icon then press 'STOP'. A window appears to confirm the stop of the navigation: press 'CONFIRM' and the symbol identifies Target disappears from the screen.

3.4 NAVIGATION ON A ROUTE

Sometimes it is preferable to define a series of locations, called Waypoints, in a sequence called a Route and navigate following a Route towards its end point.

3.4.1 ADDING WAYPOINT

To create a Waypoint place the cursor on position you want, press 'ENTER', select "WAYPOINT", press 'ENTER' again. The Waypoint appears on the screen and this becomes the first point on your first Route. An info window containing Route number, data and time, Waypoint name, symbol and Latitude/Longitude is shown.

3.4.2 CREATING A ROUTE

Repeat the "Adding Waypoint" procedure described in the previous Par. 3.4.1. The sequence of moving the cursor and pressing 'ENTER' is continued to create the Route, until you have reached the last Waypoint, your final destination. Segments connecting the Waypoints are shown and the starting point is identified by a circle surrounding the first Waypoint of the Route:

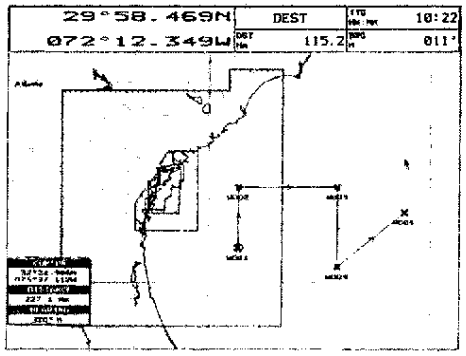

Fig. 3.4.2 - Route planning

3.4.3 DELETING WAYPOINT

Place the cursor on the Waypoint to be deleted:

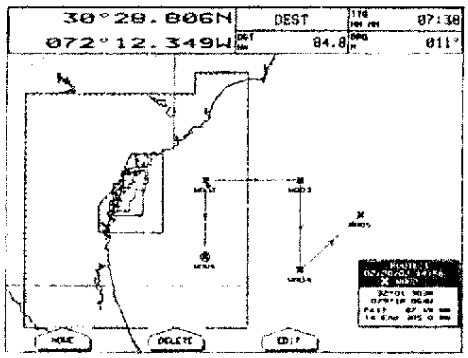

Fig. 3.4.3 - Deleting Waypoint (1)

Press 'DELETE'. A window is opened to advise that Waypoint is being used in a Route, "are you sure you want to delete it?": press 'CONFIRM' ('CANCEL' otherwise). The Waypoint is deleted and a new line between previous and next Waypoint is shown.

The deleted Waypoint remains shaded until the screen is redrawn.

3.4.4 DISTANCE AND BEARING TO TARGET

Once you have positioned the cursor on the preferred starting Waypoint (it could be the first Waypoint of the Route or another one) press 'GOTO'.

A circle surrounds the Waypoint symbol. A dotted line is shown, connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

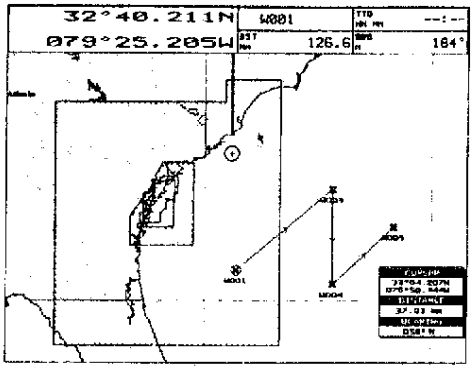

Fig. 3.4.4 - Selecting destination (Target)

The destination will automatically switch to the next Waypoint on the Route when you reach or pass the present destination.

3.4.5 TIME TO GO

When the Target is set the TTG value can be displayed in the Text Area (see Par. 3.1.1). Otherwise select the 3D Road Page (see Par. 3.1.4) where you can readTTG value:

- **'DATA' + "3D ROAD" + 'ENTER'**

or

- **press any soft keys + 'ROAD' (if it is present)**

3.4.6 DELETING TARGET

Place cursor on Target icon then press 'STOP'. A window appears to confirm the stop of the navigation: press 'CONFIRM'. The symbol that identifies Target disappears from the screen and the Waypoint remains.

3.5 C-MAP NT+ INFORMATION

As part of C-MAP's continuous Electronic Vector Chart product development and improvement program, **C-MAP NT+**, a natural evolution of our Electronic Chart technology, has been released.

The key points of NT+ can be divided into five main categories:

1. Coverage/Price
2. Chart/Display Presentation
3. New Features/Functions

4. Accessories
5. Compatibility

Looking at the chart displayed on the screen, you will see a variety of objects and symbols. Refer to the Cartography Reference Guide for their explanation.

The display can be customized for your personal preferences and needs (see the following paragraphes).

3.5.1 DISPLAY MODE

➤ **'MENU' + "MAP" + 'ENTER' + "Display Mode" + 'ENTER'**

To simplify the customization of the chart display, the map settings are now re-organized in modes allowing the user to choose the preferred setting. Pre-programmed settings are user selectable from Full, Simple, Fishing, Low and Custom. The default setting is Custom. The custom selection allows the user to customize the chart to users preferences. The chart below shows the selections for each mode:

Setting	Full	Simple	Fishing	Low	Custom (Default values)
Names	On	On	On	Off	On
Nav-Aids	INT	INT	INT	INT	INT
Light Sectors	On	Off	Off	Off	On
Attention Areas	On	On	On	Off	On
Tides & Currents	On	On	Off	Off	On
Seabed Type	On	Off	On	Off	On
Ports & Services	On	On	Off	Off	On
Tracks & Routes	On	Off	Off	Off	On
Underwater Objects	On	Off	On	Off	On
Depth Areas	On	On	On	Off	On
Depth Areas >	0005	0005	0005	0005	00002 Mt
Depth Areas <	0030	0030	0030	0030	00009 Mt
Depth Lines & Soundings	On	On	On	Off	On
Depth Lines & Soundings >	0000	0000	0000	0000	00000 Mt
Depth Lines & Soundings <	9999	0005	9999	0005	00305 Mt
Rivers & Lakes	On	On	Off	Off	On
Natural Features	On	Off	Off	Off	On
Cultural Features	On	Off	Off	Off	On
Landmarks	On	On	Off	Off	On
Lat/Lon Grid	On	Off	On	Off	On
Chart Boundaries	On	Auto	Off	Off	On
Cartography	On	On	Off	On	On
Mixing Levels	On	Off	On	Off	On
Declutter	Off	On	Off	On	Off

3.5.2 CUSTOMIZE MAP

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER'**

This function allows the user to customize the following selections and is divided into the following setting menus: Marine Settings, Depth Settings, Land Settings and Chart Settings. If any of the settings are changed while in the Customize Map mode, when exiting the chartplotter will show a prompt "Do you want to change Display Mode to Custom?". Press 'CONFIRM' to accept.

Note

The Warning window appears only if Display Mode is not Custom.

3.5.2.1 Marine Settings

The Marine Settings menu controls the display on the map of the marine features.

Names: On/Off. The default setting is On.

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Names" + 'ENTER'**

Nav-Aids: US/US Simple/INT/INT Simple/Off. The default setting is INT. When selected it affects Lights, Signals, Buoys & Beacons display.

- **INT(ernational)**: Draws Nav-Aids using international symbology. All components of Complex Objects are shown.

- **INT(ernational) Simplified**: Shows Complex Object with one icon only. Non-complex Nav-Aids are shown using international symbology.

- **US**: Draw Nav-Aids using NOAA symbology. All components of Complex Objects are shown.

- **US Simplified**: Shows Complex Object with one icon only. Non-complex Nav-Aids are shown using NOAA symbology.

- **Off**: Lights, Signals, Buoys & Beacons are no longer displayed on the charts.

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Nav-Aids" + 'ENTER'**

Light Sectors: On/Off. The default setting is On. Light Sectors are not displayed when Nav-Aids option is set to Simplified or Off (the display of Light Sectors is decided by the cartographic Library).

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Light Sectors" + 'ENTER'**

Attention Areas: On/Off. The default setting is On. The Attention Areas will always be contour only when On.

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Attention Areas" + 'ENTER'**

Tides & Currents: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Tides & Currents" + 'ENTER'

Seabed Type: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Seabed Type" + 'ENTER'

Ports & Services: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Ports & Services" + 'ENTER'

Tracks & Routes: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Tracks & Routes" + 'ENTER'

Underwater Objects: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + " MARINE SETTINGS" + 'ENTER' + "Underwater Objects" + 'ENTER'

3.5.2.2 Depth Settings

The Depth Settings menu controls the display on the map of the depth informations.

Depth Areas: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Areas" + 'ENTER'

Depth Areas >: Sets a min reference depth value. The default setting is 5 Ft.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Areas >" + 'ENTER'

Depth Areas <: Sets a max reference depth value. The default setting is 30 Ft.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Areas <" + 'ENTER'

Depth Lines & Sndgs: On/Off. The default setting is On.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Lines & Sndgs" + 'ENTER'

Depth Lines & Sndgs >: Sets a min reference depth & soundings value. The default setting is 0 Ft.

- 'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Lines & Sndgs >" + 'ENTER'

Depth Lines & Sndgs <: Sets a max reference depth & soundings value. The default setting is 09999 Ft.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "DEPTH SETTINGS" + 'ENTER' + "Depth Lines & Sndgs <" + 'ENTER'**

3.5.2.3 Land Settings

The Land Settings menu controls the display on the map of the terrestrial features.

Rivers & Lakes: On/Off. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "LAND SETTINGS" + 'ENTER' + "Rivers & Lakes" + 'ENTER'**

Natural Features: On/Off. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "LAND SETTINGS" + 'ENTER' + "Natural Features" + 'ENTER'**

Cultural Features: On/Off. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "LAND SETTINGS" + 'ENTER' + "Cultural Features" + 'ENTER'**

Landmarks: On/Off. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "LAND SETTINGS" + 'ENTER' + "Landmarks" + 'ENTER'**

3.5.2.4 Chart Settings

The Chart Settings menu controls the display on the map of the chart features.

Lat/Lon Grid: On/Off. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "CHART SETTINGS" + 'ENTER' + "Lat/Lon Grid" + 'ENTER'**

Chart Boundaries: On/Off/Auto. The default setting is On.

- **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "CHART SETTINGS" + 'ENTER' + "Chart Boundaries" + 'ENTER'**

Cartography: On/Off. The default setting is On. Used to zoom-in and pan everywhere regardless the existence of data. While in "virtual cartography" (Cartography Off) by setting Cartography On from menu, the chartplotter displays the previous scale level with charts. Again while in Cartography On, the chartplotter will work in the same way also when you exit from the charts coverage, panning with the cursor or because of a ship position change. When in Cartography Off, it is also possible to have virtual cartography between two subsequent scale levels with charts.

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "CHART SETTINGS" + 'ENTER' + "Cartography" + 'ENTER'**

Mixing Levels: On/Off. The default setting is Off. When the map coverage at the current zoom level does not fill the entire screen, the chartplotter draws the rest of the map expanding the cartographic information read from, at most, two zoom levels above the current zoom level. For this reason the map is drawn three times: firstly it draws the two levels before the current level and then the current level. The area covered by the cartographic data read from the previous levels is identified by a dotted pattern. When the cursor is moved on an area not covered by data of the current level and the Cartography item is switched Off, the chartplotter zooms out to the first level covered by cartographic data. When the Cartography item is switched On, the cursor can be moved on the areas obtained from the previous levels but no information is provided on the objects found on that area since it is considered not suitable for navigation at that scale level.

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "CHART SETTINGS" + 'ENTER' + "Mixing Levels" + 'ENTER'**

Note

The Mixing Levels function works only with the new NT+ C-CARDs. It also affects the speed of the redraw of the screen. If this function is not used it maybe disabled.

Declutter: On/Off. The default setting is Off. When it is On removes overlapping text (e.g. Names, Spot Soundings etc.).

➤ **'MENU' + "MAP" + 'ENTER' + "CUSTOMIZE MAP" + 'ENTER' + "CHART SETTINGS" + 'ENTER' + "Declutter" + 'ENTER'**

3.5.3 GETTING AUTOMATIC INFO

The type of Automatic Info is user selectable.

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Auto Info" + 'ENTER'**

The possible settings are:

- **Off**: disabled, no automatic info shown at all.
- **On Points**: only on points. This is the default setting.
- **On All**: on all objects (points, lines, areas and text).

The Automatic Info On Points shows information when the cursor is placed on points (as Port Services, Tides, lights, wrecks, rocks, buoys, beacons, obstructions, land markers, etc.). The Automatic Info On All shows information when the cursor is placed on points, on lines (as Depth contours, Traffic Separation, Territorial Sea, Cartographic Lines etc.) on areas (Depth, Built-up, Sea, Attention, Restricted etc.) and on names (on the beginning of the text -hot spot- or on any of the characters of the name -name message box-).

The details on Land, Source of Data, Cartographic Area and Spot Soundings are not shown.

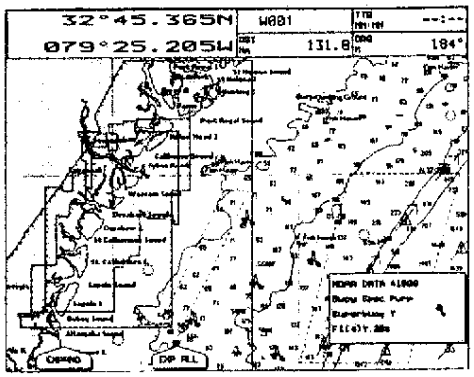

Fig. 3.5.3 - Automatic Info on Points window

If you press 'EXPAND' you get the information about that object.

Otherwise if you press 'EXP ALL' all available information about the cartographic point under the cursor will be shown (see Par. 3.5.4).

3.5.4 INFO TREE AND EXPANDED INFO PAGE

This page combines the Info Tree and the Expanded Info pages; this gives the advantage of showing the details of the object selected on the Info Tree while the cursor is moving through the Info Tree's items.

The upper side of the page contains the Info Tree and the Lower side contains the expanded information. While moving the cursor through the Info Tree, all the relevant information of the selected object is shown on the lower part of the page.

When the selected object is a Tide Height, pressing 'ENTER' the Tide page is shown.

Pressing 'CLEAR' the page is closed.

If the information shown exceeds the page size, the user may scroll the page down pressing 'PAGE DN'. The 'HOME' restart the Expanded Info.

3.5.5 INFO FUNCTION

Place the cursor in any place you want and press:

- **'INFO'**

  to show the Info Tree and Expanded Info page (see Par. 3.5.4).

3.5.6 GETTING PORT INFO

Upon viewing the chart of a port or harbour, you will see a Port Info icon that can be clicked on to query the available information immediately displayed with many details.

The Port Info icon is visible only if the Ports & Services option is On (default setting).

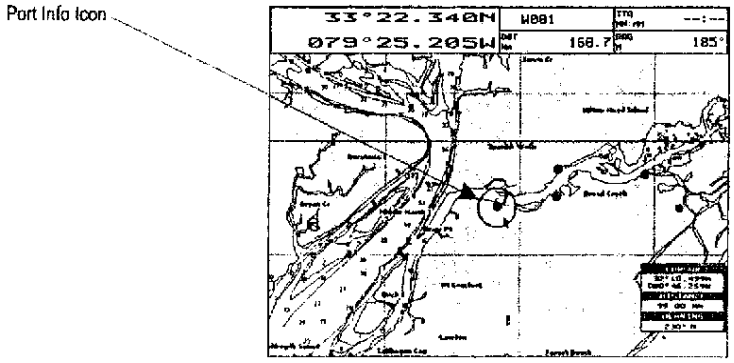

Fig. 3.5.6 - Port Info icon

The available information is shown in the Automatic Info window where icons of the available services are shown:

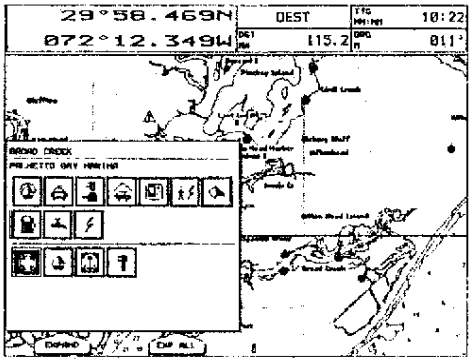

Fig. 3.5.6a - Automatic Info window

To expand information about that object press 'EXPAND' and to expand all available information for that cartographic point press 'EXP ALL'.

3.5.7 GETTING TIDE INFO

When you will see a Tide Info icon you can click on it to query the available information that will immediately be displayed.

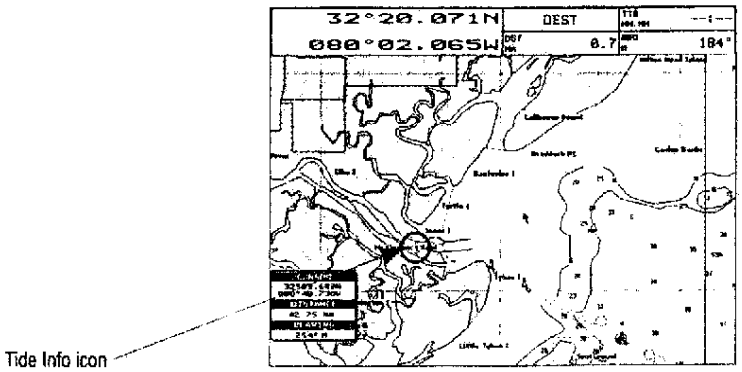

Fig. 3.5.7 - Tide Info icon

Place the cursor on the Tide symbol, a Automatic Info window is opened:

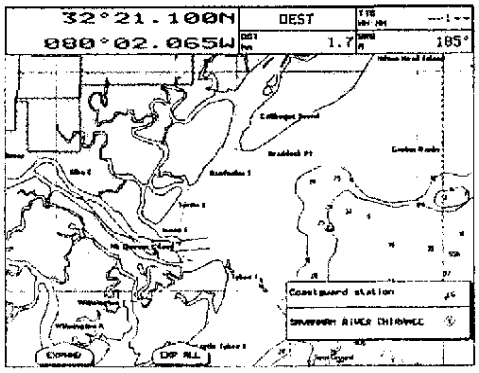

Fig. 3.5.7a - Automatic Info on Tide

To display the Tide Graph page, press 'EXPAND' (otherwise, press 'EXP ALL' to select all available information).

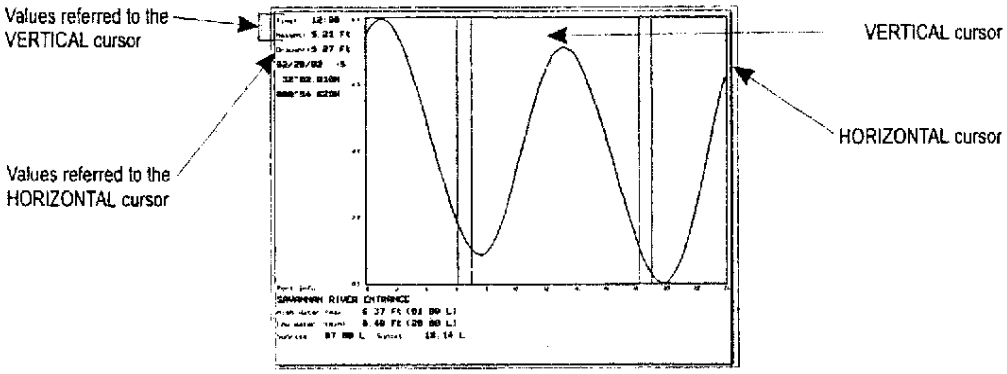

Fig. 3.5.7b - Tide Graph

Using the *Joystick*, it is possible to move the cursor anywhere on the graph and display the time, height (vertical cursor) and draught (horizontal cursor) on a particular graph

point. Also use 'ZOOM IN' or 'ZOOM OUT' to go to previous or next day and 'ENTER' to set date (move the *Joystick* up/down to insert the preferred number and use it left/right to move cursor to left/right).

Note

Tide graphs are an approximation of the tide and they should be used in conjunction with traditional tide tables and navigational methods.

3.5.8 FIND FUNCTION

The chartplotter allows finding Port Services, Port By name, Tide Stations, Wrecks, Obstructions, Cursor, Coordinates and User Points.

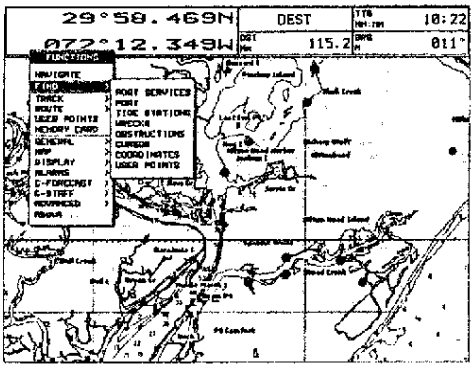

Fig. 3.5.8 - Find funtion

3.5.8.1 Finding Port Services

To locate and display the nearest available facilities of a particular type (i.e. the nearest Hospital, sailmaker, bank, etc.).

- **'MENU' +"FIND" + 'ENTER' + "PORT SERVICES" + 'ENTER'**

  The icons of the available services are shown.

Use the *Joystick* to select any facility and press 'ENTER' or 'FIND'. The list of the nearest ports (up to 10) containing the facility, will be shown on the screen.

Then choose the port you want and press 'ENTER' or 'FIND'.

3.5.8.2 Finding Nearest Ports

Shows the list of all (max 8 ports) placed near the cursor position.

- **'MENU' +"FIND" + 'ENTER' + "PORT" + 'ENTER'**

  Use the *Joystick* to select the port. Press 'ENTER' or 'FIND' to locate it.

Finding All Ports

To show the list of all ports stored on the C-CARD and to locate them on the map follow the procedure:

- **'MENU' +"FIND" + 'ENTER' + "PORT" + 'ENTER' + 'PORTS'**

Use the *Joystick* to select the port and 'ZOOM IN'/'ZOOM OUT' to select next/previous page. Press 'ENTER' or 'FIND' to locate the selected port on the map.

Note

A Warning message is shown if there is not C-CARD inserted or there are not ports on the C-CARD.

Searching by name

➤ **'MENU' +"FIND" + 'ENTER' + "PORT" + 'ENTER' + 'PORTS' + 'NAME'**

Use the *Joystick* to insert port name (max 15 characters). Press 'CONFIRM' or 'ENTER' to accept; press 'CANCEL' or 'CLEAR' to cancel name entry. If inserted name is found, the list with all ports containing the inserted name is shown. Repeat the operation to refine search or move through the list with *Joystick*. Press 'ENTER' to locate the port on the map.

Note

A Warning message is shown when the inserted name is not in the ports list.

Searching by list

➤ **'MENU' +"FIND" + 'ENTER' + "PORT" + 'ENTER' + 'PORTS' + 'LIST'**

Rebuild and display the complete ports list. Use the *Joystick* to select the port and 'ZOOM IN'/'ZOOM OUT' to select next/previous page. Press 'ENTER' or 'FIND' to locate the selected port on the map.

3.5.8.3 Finding Tide Stations

Finds the nearest Tide Stations (up to 10) on the map, from the boat position - if a valid fix is received - or from the cursor position - if the received fix position is not good.

➤ **'MENU' +"FIND" + 'ENTER' + "TIDE STATIONS" + 'ENTER'**

A new window will appear in few seconds. Choose the Tide Stations you want and press 'ENTER' or 'FIND' to display the Tide Graph page (see Par. 3.5.7b). Press 'CLEAR' to display the Tide Station chosen.

3.5.8.4 Finding Wrecks

Searches for Nearest Wrecks:

➤ **'MENU' +"FIND" + 'ENTER' + "WRECKS" + 'ENTER'**

Use the *Joystick* to select the port and 'ZOOM IN'/'ZOOM OUT' to select next/previous page. Press 'ENTER' or 'FIND' to locate the selected Wreck on the map.

3.5.8.5 Finding Obstructions

Searches for Nearest Obstructions:

➤ **'MENU' +"FIND" + 'ENTER' + "OBSTRUCTIONS" + 'ENTER'**

Use the *Joystick* to select the port and 'ZOOM IN'/'ZOOM OUT' to select next/previous page. Press 'ENTER' or 'FIND' to locate the selected Obstruction.

3.5.8.6 Finding Cursor

Centers the cursor on the screen:

- 'MENU' +"FIND" + 'ENTER' + "CURSOR" + 'ENTER'

3.5.8.7 Finding Coordinates

Allows to enter LAT/LON to locate a cartographic point:

- 'MENU' +"FIND" + 'ENTER' + "COORDINATES" + 'ENTER'

3.5.8.7 Finding User Points

Searches the User Points by name:

- 'MENU' +"FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

3.6 MAN OVERBOARD (MOB)

It is an important function useful in the case someone or something falls overboard.

3.6.1 INSERTING MOB

Press 'MOB' to place MOB symbol at ship's coordinates: the message "MOB Activate" is shown for a few second, then disappears. Data displayed in Text Area are related to MOB.

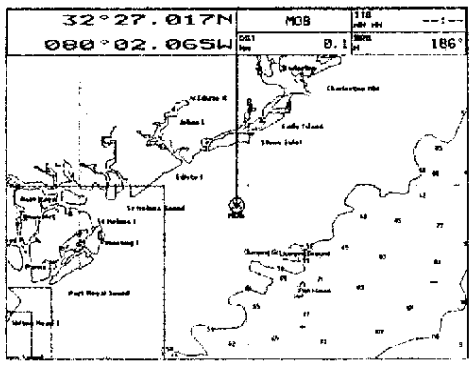

Fig. 3.6.1 - Man Overboard

3.6.2 DELETING MOB

Press 'MOB': a window to confirm the MOB deletion is shown, press 'CONFIRM' (or "CANCEL' to abort operation). The MOB symbol remains on the screen shaded until the next screen redraws.

4
For the Experienced User

Now that you are familiar with your new chartplotter, it is time to found about a large number of advanced features that you will find helpful.

4.1 MORE ABOUT CREATING AND USING ROUTES

At anytime, you may add or delete Waypoints, see a Route summary, reverse the direction of the Route or erase the entire Route.

4.1.1 ROUTES

The following functions are used for the Route management.

➤ 'MENU' + "ROUTE" + 'ENTER'

4.1.1.1 Selecting Route

➤ 'MENU' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER'

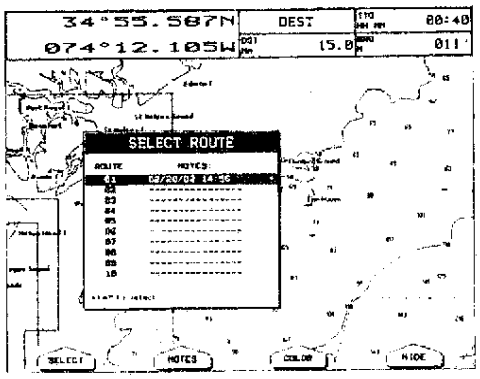

Fig. 4.1.1.1 - Select route window

Use the *Joystick* to select the preferred Route number. The following functions are available.

Displaying Route

➤ 'MENU' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'SELECT'

The Route, shown by straight segments, is centered on the screen, with the cursor on the central Waypoint.

Editing notes

➤ 'MENU' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'NOTES'

Another window is shown: use the *Joystick* to insert the notes (this is possible only if you have already created a Route). Press 'ENTER' to confirm ('CANCEL' otherwise).

Hide/Show Route

➤ 'MENU' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'HIDE/SHOW'

Allows to hide or show the selected Route on the screen.

Route Color

➤ 'MENU' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'COLO'

It is possible to change colot. After pressing 'COLOR' another window is shown: use the Joystick to choose the preferred color (among 8 colors) for the Route. Press 'ENTER' to confirm ('CANCEL' otherwise).

4.1.1.2 Deleting Route

➤ 'MENU' + "ROUTE" + 'ENTER' + "DELETE" + 'ENTER'

A window is opened: press 'CONFIRM' to delete ('CANCEL' otherwise). The Route remains on the screen shaded until the screen is redrawn.

4.1.1.3 Finding information on Route: Route Report

➤ 'MENU' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER'

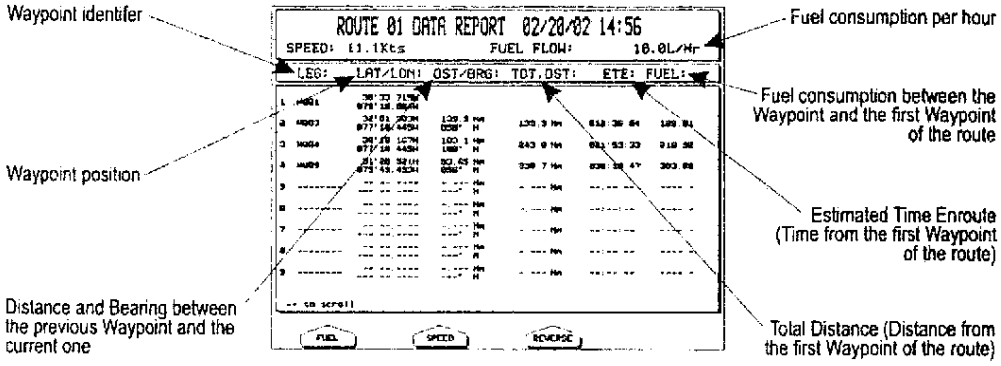

Fig. 4.1.1.3 - Route Data Report page

If there are more than nine Waypoint shown, use the *Joystick* to select another page.

Changing Speed & Fuel values

- **'MENU' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'FUEL'**
- **'MENU' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'SPEED'**

Insert value by using the *Joystick* and pressing 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' abort operation).

Reversing Route

- **'MENU' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'REVERSE'**

Reversing a Route plan is most typically used to return to the point where the Route originally started.

4.1.1.4 Route Color

- **'MENU' + "ROUTE" + 'ENTER' + "COLOR" + 'ENTER'**

It is possible to change Route color. After pressing 'ENTER' a window with 8 different colors appears. Use the Joystick to select the Route legs color and press 'ACCEPT' ('CANCEL' otherwise).

4.1.2 WAYPOINTS

You may add Waypoints, delete Waypoints from a Route, move any Waypoint in the Route to another location, insert a Waypoint between two existing ones, find any Waypoint at anytime. Every time you place the cursor on a Waypoint the following functions are available.

4.1.2.1 Adding Waypoint

- **'ENTER' + "WAYPOINT" + 'ENTER'**

The Waypoint appears on the screen on the cursor position. An info window is shown containing Route number, data and time, Waypoint name, symbol, color and Latitude/Longitude, information on previous and - if the Waypoint is not the last of the Route - also on the next Waypoint. To create a Route inserting additional Waypoints repeat the above described sequence.

4.1.2.2 Moving Waypoint

- **Add Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on existing Waypoint**

Press 'MOVE'. Use the *Joystick* to move the cursor: a dotted line, connecting the Waypoint to the new position, is shown:

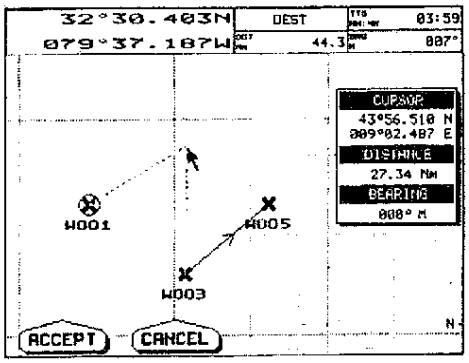

Fig. 4.1.2.2 - Moving Waypoint function (I)

To place the Waypoint in the new position, choose the new place and press 'ACCEPT' (or 'CANCEL' otherwise). The "old" Waypoint remains shaded until the screen is redrawn.

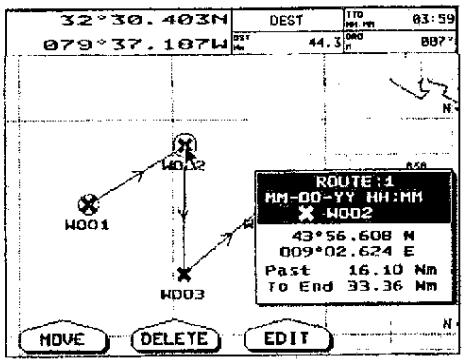

Fig. 4.1.2.2a - Moving Waypoint function (II)

4.1.2.3 Deleting Waypoint

- Add Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on existing Waypoint

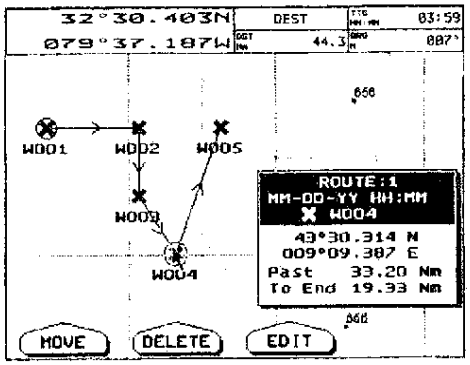

Fig. 4.1.2.3 - Deleting Waypoint (I)

Press 'DELETE'. A Warning message is shown to advise that Waypoint is currently used in a Route: press 'CONFIRM' to confirm deletion ('CANCEL' otherwise). The Waypoint is deleted and a new line between previous and next Waypoint is shown. The deleted Waypoint remains shaded until the screen is redrawn.

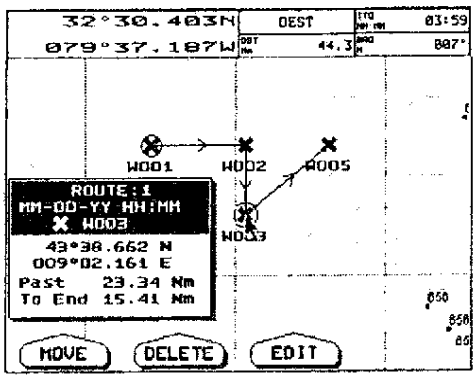

Fig. 4.1.2.3a - Deleting Waypoint (II)

4.1.2.4 Editing Waypoint

- **Add Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on existing Waypoint**

Press 'EDIT' to modify a Waypoint. A window will be shown with Name, Symbol, Color and Latitude/Longitude of the Waypoint, advicing about what Waypoint data are modifiable:

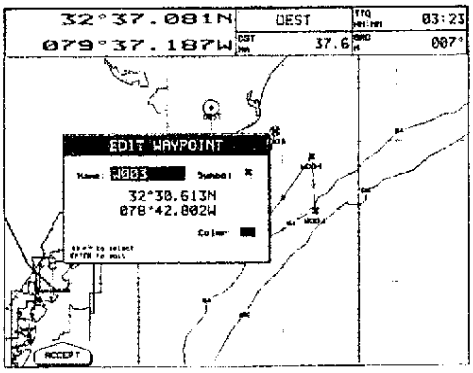

Fig. 4.1.2.4 - Edit Waypoint

Use the *Joystick* to select the field. If you have selected Name field, press 'ENTER': use the *Joystick* to insert the character (8 characters max), press 'ENTER'. If Symbol field is selected press 'ENTER', a window with 16 different symbols appears:

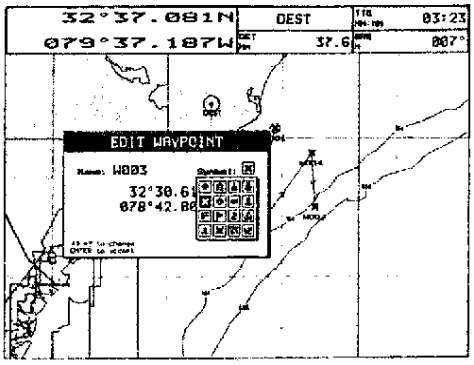

Fig. 4.1.2.4a - Waypoint symbols

Use the *Joystick* to select the Symbol and press 'ENTER'. If Coordinates field is selected, press 'ENTER' and then use the *Joystick* to insert the value. If you have selected Color field, press 'ENTER': a window with 16 different colors appears. Use the Joystick to select the color and press 'ENTER'. Then press 'ACCEPT'.

4.1.2.5 Goto

- **Add Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on existing Waypoint**

Press 'GOTO': a circle encloses the Waypoint symbol. On the screen a straight line is shown, connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

4.1.2.6 Inserting Waypoint

Every time you place the cursor on the segment connecting two existing Waypoints of a Route the following function is available.

- **Place cursor on Route leg**

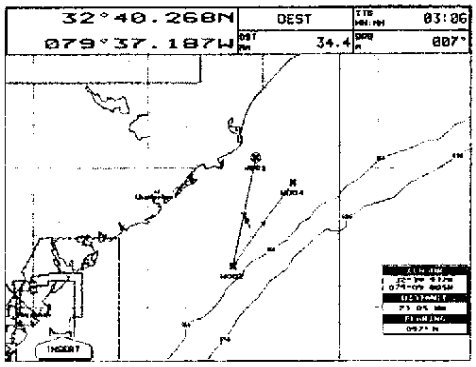

Fig. 4.1.2.6 - Placing Waypoint between two existing ones (1)

Press 'INSERT'. The line between the two Waypoints is turned into a dotted line:

move the cursor to the new position. When the cursor is stationary for one second or two, the line will "rubber-band", drawing a dotted line between the last Waypoint and the cursor, and another dotted line between the cursor and the next Waypoint:

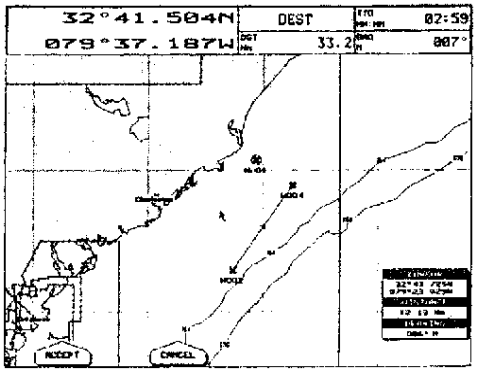

Fig. 4.1.2.6a - Placing Waypoint between two existing ones (II)

Once you have positioned the cursor at new location, press 'ACCEPT':

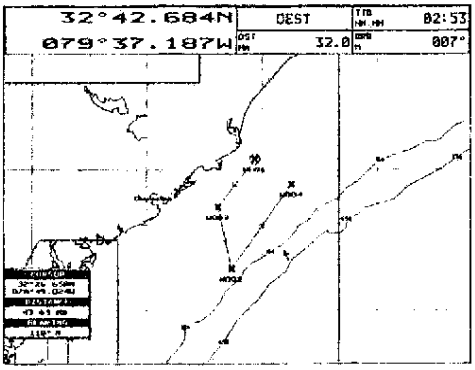

Fig. 4.1.2.6b - Placing Waypoint between two existing ones (III)

4.1.2.7 Finding Waypoint

- **'MENU' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'**

  A window is opened to find a stored Waypoint by entering its label:

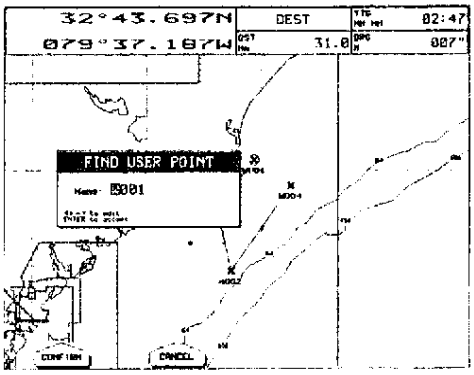

Fig. 4.1.2.7 - Finding Waypoint function (I)

Use the *Joystick* to insert the name and press 'CONFIRM' ('CANCEL' otherwise). For example, if the inserted name is W001, the cursor is placed on this Waypoint and the info window is shown:

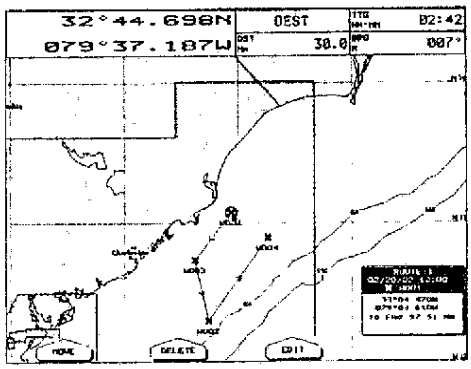

Fig. 4.1.2.7a - Finding Waypoint function (II)

4.1.2.8 Finding information on Waypoints: User Points List page

➤ 'MENU' + "USER POINTS" + 'ENTER'

A full window is opened showing information about all stored User Points. Move up/down the *Joystick* to select the User Point you wish. If the page contains more than 11 User Points, the list continues in the next pages.

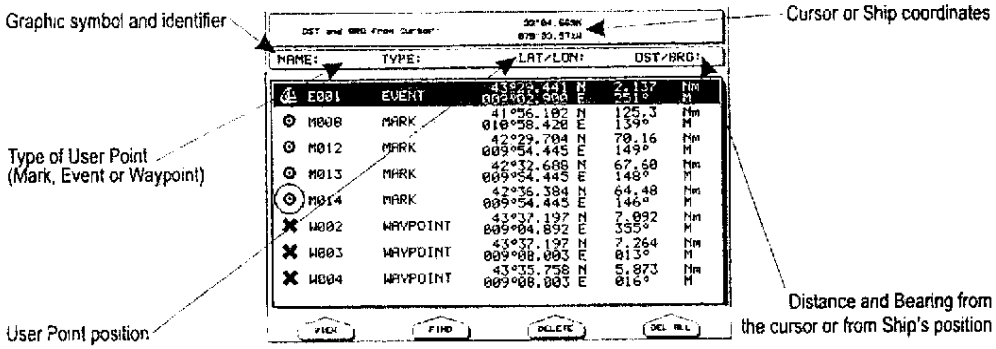

Fig. 4.1.2.8 - User Points page

Note

In the list to identify the current Target a circle encloses the User Point symbol.

Viewing Waypoint in map display

➤ 'MENU' + "USER POINTS" + 'ENTER' + 'VIEW'

The chartplotter exits from the User Points List page and redraws the chart. The selected point appears, with the cursor placed on it. Press 'CLEAR' to exit and return to User Point List page.

Finding Waypoint in the User Points List page

➤ 'MENU' + "USER POINTS" + 'ENTER' + 'FIND'

A window appears: insert the name by using the *Joystick*. Press 'ENTER': in the User Points List page the chartplotter shows the Waypoint in reverse video screen.

Deleting Waypoint

➤ 'MENU' + "USER POINTS" + 'ENTER' + 'DELETE'

A warning message is shown; press 'CONFIRM' ('CANCEL' othewise).

Deleting all stored User Points

➤ 'MENU' + "USER POINTS" + 'ENTER' + 'DEL ALL'

A warning message is shown, press 'CONFIRM' ('CANCEL' otherwise).

Note

If you try to delete any User Point used as GOTO a Warning window will appear, advicing that the User Point belongs to an active Route and cannot be deleted.

4.2 USING MARKS & EVENTS

You may place a Mark, as it is called, at your cursor position, while Event is created at your vessel position.

4.2.1 MARKS

You may tag a location on the chart with a Mark symbol and number, which you can record for later use. Every time you place the cursor on a Mark the following functions are available.

4.2.1.1 Adding Mark

➤ 'ENTER' + "MARK" + 'ENTER'

The new Mark appears on your cursor position. An info window containing Mark name, symbol, color and Latitude/Longitude is shown.

4.2.1.2 Moving Mark

➤ Add Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on existing Mark

Press 'MOVE'. By moving the cursor with the *Joystick*, a dotted line connecting the Mark with the new position is shown:

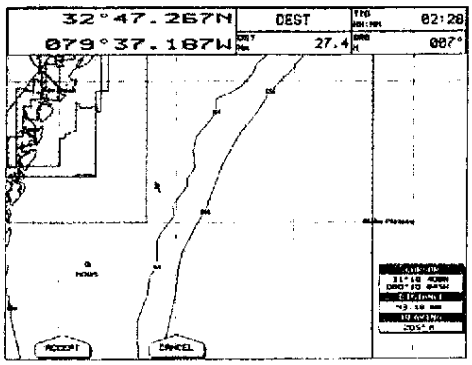

Fig. 4.2.1.2 - Moving Mark function (I)

Press 'ACCEPT':

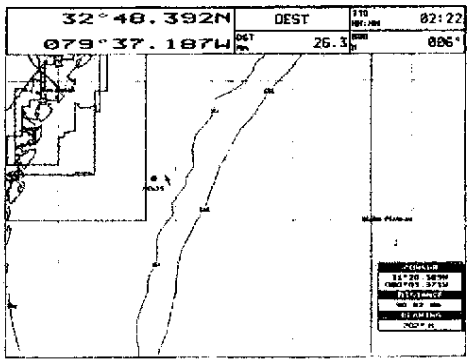

Fig. 4.2.1.2a - Moving Mark function (II)

The Mark is placed in the new position, the "old" Mark, remains on the screen shaded until the screen is redrawn.

4.2.1.3 Deleting Mark

- **Add Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on existing Mark**

Press 'DELETE': a window to confirm the deletion is shown. Press 'CONFIRM' ('CANCEL' otherwise): the Mark remains on the screen shaded until the next screen is redrawn.

4.2.1.4 Editing Mark

- **Add Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on existing Mark**

Press 'EDIT'. A window appears to modify Name, Symbol, color and coordinates of the existing Mark.

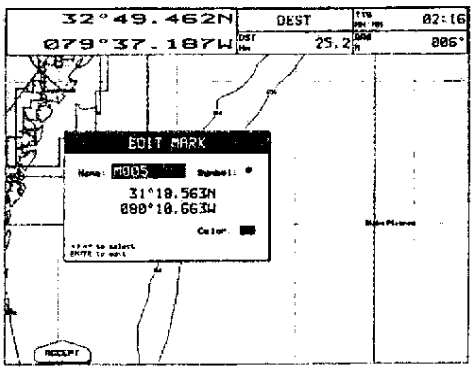

Fig. 4.2.1.3 - Graphic symbol setting

Use the *Joystick* to select the field. If you have selected Name field, press 'ENTER': use the *Joystick* to insert the character (8 characters max), then press 'ENTER'. If Symbol field is selected press 'ENTER': a window with 16 different symbols appears. Use the *Joystick* to select the symbol and press 'ENTER'. If Coordinates field is selected, press 'ENTER' and then use the *Joystick* to insert the value. If you have selected Color field, press 'ENTER': a window with 16 different colors appears. Use the Joystick to select the color and press 'ENTER'. Then press 'ACCEPT'.

4.2.1.5 Goto

➤ **Add Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on existing Mark**

Press 'GOTO': a circle encloses the Mark symbol. A straight line is shown on the screen connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

4.2.1.6 Finding Mark

➤ **'MENU' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'**

A window is opened to find a stored Mark by entering its label. Use the *Joystick* to insert the name and press 'CONFIRM' ('CANCEL' otherwise).

4.2.1.7 Finding information on Marks: User Points List page

➤ **'MENU' + "USER POINTS" + 'ENTER'**

A full window is opened showing information about all stored User Points (Marks, Events and Waypoints). Move up/down the *Joystick* to select the User Point you wish. If the page contains more than 11 User Points, the list continues in the next pages. See Par. 4.1.2.8.

4.2.2 EVENTS

In Navigate mode you may place a location with an Event symbol and number,

directly on the ship's position. Move the cursor to exit from Navigate mode; place the cursor on an Event to access the following functions.

4.2.2.1 Adding Event

- **Select Navigate mode: 'MENU' + "NAVIGATE" + 'ENTER', then 'ENTER' + "MARK" + 'ENTER'**

  An Event is placed directly on the ship's position.

Note

It is possible to place an Event only if the chartplotter is making a valid position fix.

4.2.2.2 Deleting Event

- **Place cursor on existing Event + 'DELETE'**

  A window to confirm the deletion is shown. Press 'CONFIRM' ('CANCEL' otherwise): the Event remains on the screen shaded until the next screen is redrawn.

Note

If you try to delete any User Point used as GOTO a Warning window will appear, advicing that the User Point belongs to an active Route and cannot be deleted.

4.2.2.3 Editing Event

- **Place cursor on existing Event + 'EDIT'**

  A window appears to modify Name, Symbol and color the existing Event.

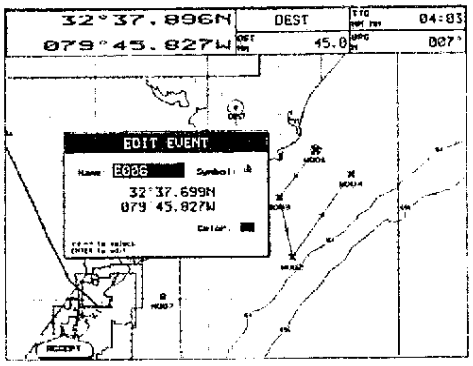

Fig. 4.2.2.3 - Editing Event

Use the *Joystick* to select the field. If you have selected Name field, press 'ENTER': use the *Joystick* to insert the character (8 characters max), press 'ENTER'. If Symbol field is selected press 'ENTER': a window with 16 different symbols appears. Use the *Joystick* to select the Symbol and press 'ENTER'. If Coordinates field is selected, press 'ENTER' and then use the *Joystick* to insert the value. If you have selected Color field, press 'ENTER': a window with 16 different colors appears. Use the Joystick to select the color and press 'ENTER'. Then press 'ACCEPT'.

4.2.2.4 Goto

➤ **Place cursor on existing Event + 'GOTO'**

A circle encloses the Event symbol. A straight line is shown connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

4.2.2.5 Finding Event

➤ **'MENU' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'**

A window is opened to find a stored Event by entering its label. Use the *Joystick* to insert the name and press 'CONFIRM' ('CANCEL' otherwise).

4.2.2.6 Finding information on Events: User Points List page

➤ **'MENU' + "USER POINTS" + 'ENTER'**

A full window is opened showing information about all stored User Points (Marks, Events and Waypoints). Move up/down the *Joystick* to select the User Point you wish. If the page contains more than 11 User Points, the list continues in the next pages. See Par. 4.1.2.8.

4.3 R/B FUNCTION

Selects the Range and Bearing, R/B, function.

4.3.1 INSERTING R/B

➤ **'ENTER' + "R/B" + 'ENTER'**

A dotted line and a circle appears on the screen. A window with the DST and BRG values is shown. The origin of the line and the circle's centre is the cursor position: use the *Joystick* to move the dotted line in any direction you choose; in the same time the radius changes. Press 'ACCEPT' to confirm ('CANCEL' otherwise).

4.3.2 DELETING R/B

➤ **'ENTER' + "R/B" + 'ENTER' + 'ACCEPT'**

Press 'DELETE' to delete the line and the circle.

4.3.3 EDITING R/B

➤ **'ENTER' + "R/B" + 'ENTER' + 'ACCEPT'**

Press 'EDIT' to modify the line direction and the circle' radius. Use the *Joystick* to

move the dotted line in any direction you choose; in the same time the radius changes. Press 'ACCEPT' to confirm ('CANCEL' otherwise).

4.4 USING THE TRACK FUNCTION

The chartplotter can be set up for recording your Track as you move and for plotting this Track on the chart.

4.4.1 ENABLING TRACK STORING

➤ 'MENU' + "TRACK" + 'ENTER' + "ACTIVATE" + 'ENTER'

To enable the Track storing. It is not possible to use the Track storing if you are not receiving a valid fix.

When Track storing is activated, to disable:

➤ 'MENU' + "TRACK" + 'ENTER' + "DEACTIVATE" + 'ENTER'

4.4.2 DELETING TRACK

➤ 'MENU' + "TRACK" + 'ENTER' + "DELETE" + 'ENTER'

Deletes all the Track or part of it. 'BEGIN', 'END' and 'WHOLE' allow to identify the start or the end point of the segment to delete.

4.4.3 TRACK SETTING MENU

➤ 'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER'

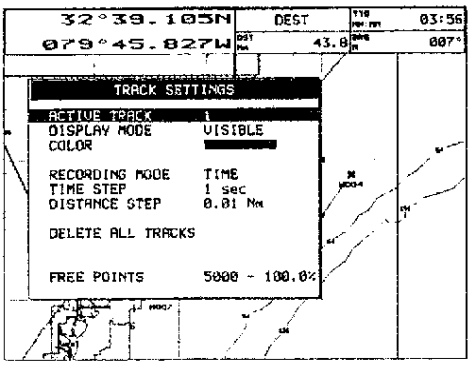

Fig. 4.4.3 - Track Settings menu

4.4.3.1 Selecting Active Track

➤ 'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "ACTIVE TRACK" + 'ENTER'

Pressing 'ENTER' more times selects the number of the active Track. The default setting is 1.

4.4.3.2 Displaying Track

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISPLAY MODE" + 'ENTER'**

Selects the displaying of the past course Visible or Hidden. The default setting is Visible.

4.4.3.3 Selecting Track Color

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "COLOR" + 'ENTER'**

Press 'ENTER' as many times as needed to select the color for the selected Track.

4.4.3.4 Selecting Track memorizing type

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "RECORDING MODE" + 'ENTER'**

Choose Distance (the chartplotter can store a fix when the distance from its last stored position is greater than a defined distance) or Time (the chartplotter can store a fix after a defined time). The default setting is Time.

4.4.3.5 Selecting Time Step

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "TIME STEP" + 'ENTER'**

When the tracking function is On and the type of Track storing is Time, the chartplotter can store a fix after a defined time. Choose among 1, 5, 10, 30 sec, 1 min. The default setting is 1 sec.

4.4.3.6 Selecting Distance Step

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISTANCE STEP" + 'ENTER'**

When the tracking function is On and the type of Track storing is Distance, you can store a fix when the distance from its last stored position is greater than a defined distance. Choose in the range 0.01, 0.05, 0.1, 0.5, 1.0, 2.0, 5.0, 10.0 Nm (the distance unit is selected by the user, see Par. 3.2.1). The default setting is 0.01 Nm.

4.4.3.7 Delete all Tracks

- **'MENU' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DELETE ALL TRACKS" + 'ENTER'**

Deletes all the stored tracks. After pressing 'ENTER' a Warning window appears: press 'CONFIRM' (or 'CANCEL' to abort operation).

4.5 PAN FUNCTION

It is possible to select the pan function; pan allows you to shift area around the cursor or a remote position to the centre of the screen.

4.5.1 MOVING CURSOR TO THE SCREEN CENTER

➤ 'MENU' + "FIND" + 'ENTER' + "CURSOR" + 'ENTER'

The screen is redrawn and the cursor with the location you want to see will shift to the center of the screen.

4.5.2 PLACING CURSOR ON COORDINATES

➤ 'MENU' + "FIND" + 'ENTER' + "COORDINATES" + 'ENTER'

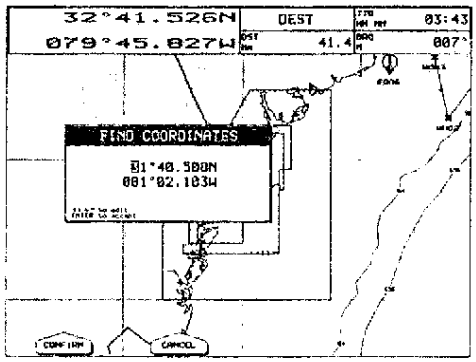

Fig. 4.5.2 - Pan on Coordinates function

Press the *Joystick* up/down to modify coordinates and the *Joystick* left/right to move cursor to left/right. Press 'CONFIRM' ('CANCEL' otherwise).

4.6 USER C-CARD MENU

The chartplotter allows to copy information to an User C-CARD. You can also return the information to internal memory at a later time. This allows virtually unlimited storage.

➤ 'MENU' + "MEMORY CARD" + 'ENTER'

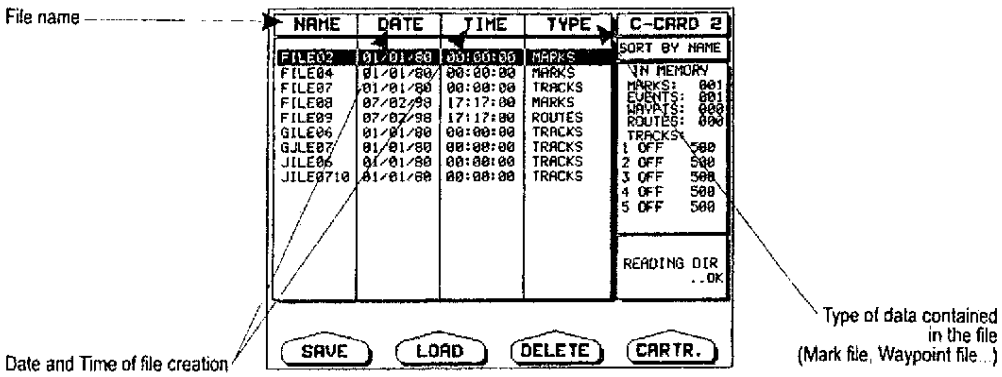

Fig. 4.6 - User C-CARD Menu

4.6.1 SAVING FILE

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'SAVE'

A window is opened to insert the file name and the type of data to save:

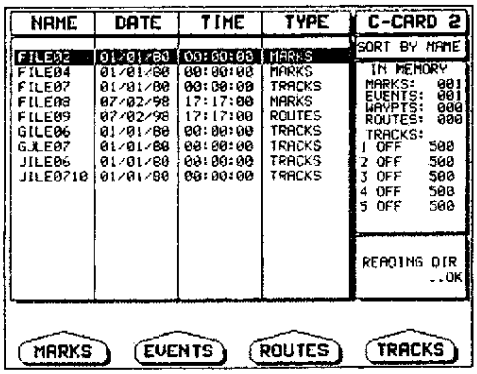

Fig. 4.6.1 - Save File function (I)

Choose the type of data to save by pressing the related 'MARKS', 'EVENTS', 'ROUTES' or 'TRACKS'. Then on the screen appears:

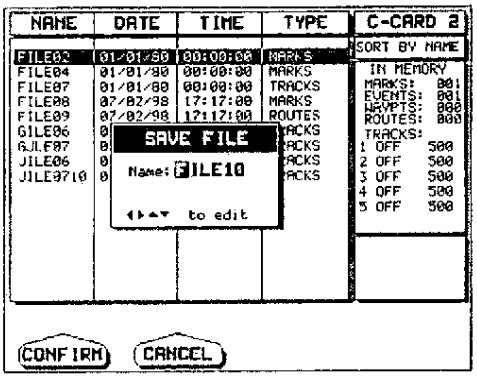

Fig. 4.6.1a - Save File function (II)

Choose the file name. At first a default name is shown: use the *Joystick* to insert the name. Press 'ENTER'.

Note

When naming a file, you may have trouble finding a name that uniquely identifies the file's contents. Dates, for example, are often used in filenames; however, they take up several characters, leaving you with little flexibility. The secret is to find a compromise, a point where you can combine a date with a word, creating a unique filename. The maximum length of the filename is 8 characters. The characters may be numbers (0, ..., 9), letters (A, ..., Z) and spaces (for example legal identifiers are "ABC", "AA", "12121212", "A B C", "1 A 1", and so on.

4.6.2 LOADING FILE

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'LOAD'

Before pressing 'LOAD', choose the file name in the list shown, using the *Joystick*.

4.6.3 DELETING FILE

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'DELETE'

Remove old or unnecessary files to clean up your User C-CARD. Remember that this option permanently erases the file.

4.6.4 USER C-CARD

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

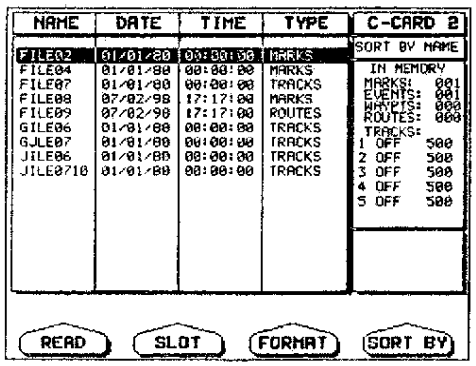

Fig. 4.6.4 - C-CARD functions

4.6.4.1 Reading the User C-CARD Directory

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'READ'

The list of the files present on the User C-CARD inserted into the slot appears.

4.6.4.2 Selecting slot

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SLOT'

Selects the preferred slot where to insert the User C-CARD. If the User C-CARD is not present in the selected slot, a warning message appears.

4.6.4.3 Formatting User C-CARD

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'FORMAT'

In order to be able to use a new User C-CARD you must format it first: this operation prepares the User C-CARD to receive and store information.

4.6.4.4 Ordering the User C-CARD Directory

➤ 'MENU' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SORT BY'

It is possible to order the file directory. This is possible in three different modes:

- Press 'NAME' to order by the filename;
- Press 'TIME' to order by the time of file creation;
- Press 'TYPE' to order by the type of data.

5
Menu Settings

There are other three menus, Display, Alarms and Advanced, to handle the chartplotter information. Once you are in the Menu, use your *Joystick* to highlight the item and press 'ENTER' to activate or to proceed to the next selection menu.

5.1 DISPLAY MENU

Display Menu allows you to change how the chartplotter displays information. It is possible to select this menu only when the active page is the Chart Display or the Depth Graph (in split mode); so firstly select one of these pages, for example Chart Display mode.

- **'DATA' + "CHART DISPLAY" + 'ENTER'**

or

- **press any soft keys + 'CHART' (if it is present)**

5.1.1 MAP ORIENTATION

- **'MENU' + "DISPLAY" + 'ENTER' + "Map Orientation" + 'ENTER'**

Selects orientation of your chart according to. The default setting is North Up.

- North Up: the map is shown with North upwards.

- Track Up: the map is shown with the ship's current heading upwards. If Track Up is selected, insert the Map Orientation Resolution angle by using the *Joystick* up and down in the range [5, 60] degrees (the default setting is 30°).

5.1.2 COURSE LINE

- **'MENU' + "DISPLAY" + 'ENTER' + "Course Line" + 'ENTER'**

The chartplotter will display a line with a circle at the end to indicate the position your ship will reach at the set time based on current direction of travel and speed. This is continuously updated to account for changes. Disables (Off) or sets time as : 2, 10, 30 min, 1, 2 hours, Infinite. The default setting is Infinite.

5.1.3 COORDINATE SYSTEM

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Coordinate System" + 'ENTER'**

Sets your preferred Coordinate System among ddd mm ss, ddd mm.mm, ddd mm.mmm, UTM, OSGB, TD. The default setting is ddd mm.mmm.

If TD is selected a new TD Settings menu will be open on the screen:

➤ **'MENU' + "DISPLAY" + 'ENTER' + "COORDINATE SYSTEM" + 'ENTER' + 'TD' + 'ENTER"**

Chain: Selects the preferred chain. The default setting is 9970.

Pair: Selects the pair of stations in the selected chain. The default setting is W X.

ASF 1/2: Sets the ASF (Additional Second Factor) for the slave in the selected chain. The default setting is 0.

Alter: Turns On/Off the Alternate Solution in the chain. The default setting is Off.

5.1.4 MAP DATUM

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Map Datum" + 'ENTER'**

Selects the Map Datum among 130 items. WGS 1984 is the default Map Datum.

5.1.5 FIX DATUM

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Fix Datum" + 'ENTER'**

Selects the Fix Datum among 130 items. WGS 1984 is the default Fix Datum.

5.1.6 EXTERNAL WAYPOINT

➤ **'MENU' + "DISPLAY" + 'ENTER' + "External WPT" + 'ENTER'**

The coordinates of a Waypoint, received from a GPS connected to the chartplotter, can be stored into the chartplotter, if the GPS is NMEA0183 protocol compatible and support the $BWC sentence (this symbol remains on the screen for 30 seconds). You may save it by placing a Waypoint or a Mark onto that symbol. As soon as the chartplotter receives another $BWC sentence with the coordinates of a new Waypoint, the symbol moves to the new point. The default setting is Off.

5.1.7 USER POINTS

➤ **'MENU' + "DISPLAY" + 'ENTER' + "User Points" + 'ENTER'**

Sets On (icon + label), Off or Icon (only icon) the displaying of User Point. The default setting is On.

5.1.8 DATA WINDOW MODE

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Data Window Mode" + 'ENTER'**

Customizes the Text Area layout among Full Screen, Text Area with 5 boxes and Text Area with 8 boxes (see Par. 3.1.1). The default setting is 5 Boxes.

5.1.9 CURSOR WINDOW

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Cursor Window" + 'ENTER'**

Enables (On) or disables (Off) the display of the cursor window on the screen. The default setting is On.

5.1.10 PALETTE

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Palette" + 'ENTER'**

It is possible to set the palette used to enhance the visibility of the screen depending on the surrounding light condition. The possible choices are Normal, Classic, Night Vision and Sunlight. The default setting is Normal. **Normal** is recommended when the chartplotter is not exposed to the direct sunlight. When this mode is set the maps are displayed in order to use colors as similar as possible to the ones used in the orignal paper charts. **Classic** is also recommended when the chartplotter is not exposed to the direct sunlight. The colors used are the same colors used on NT cartography. **Night Vision** is recommended when the environment is dark in order to reduce the glare of the display. The chartplotter displays maps and screen in darker colors. **Sunlight** is designed to enhance the visibility of the screen when the chartplotter is exposed to the sunlight. The maps are much brighter than in the other modes and the depth areas are filled with white color so different depth areas are not easily distinguishable.

5.1.11 VIDEO INPUT

➤ **'MENU' + "DISPLAY" + 'ENTER' + "Video Input" + 'ENTER'**

By accessing this menu it is possible to see images on the chartplotter display captured from an external video signal source, if connected to the chartplotter. Not all color chartplotters are connectable to the external video signal. Please make sure that your chartplotter is equipped with a video input connection port. See Par. 2.8 for more information about Video Input.

5.2 NAV DISPLAY MENU

The Nav Display menu allows to select CDI Scale and Navigation Page. It is pos-