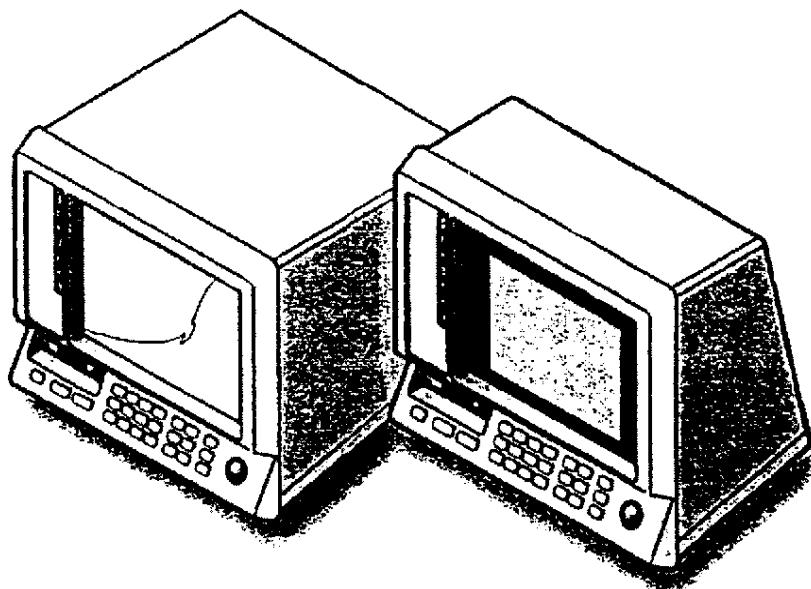

FishPI t 12

&

FishPlot 10

SI-TEX»



User Manual

FISHPLOT 12

Monochromatic Version - Issue 102A422

Software Name: PROF12M

FISHPLOT 10

Color Version - Issue 100A422

Software Name: PROF12C

User Manual

Warning!!!

Electronic charts displayed by the chart plotter 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 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 chart plotter is not built water proof. Please give attention to avoid water intrusion into the chart plotter. Water damage is not covered by the warranty.
- Extensive exposure to heat may result in damage to the chart plotter.
- Connection to the power source with reversed polarity will damage the chart plotter severely. This damage may not be covered by the warranty.
- The chart plotter contains dangerous high voltage circuits which only experienced technicians can handle.
- The **C-MAP NT G-CARDs** are available from your local dealer.

INTENTIONALLY OMITTED PAGES

1-4,8,26,46,84,134

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Chapter **1**

Introduction

1.1 Features

The chart plotter 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 (i.e. Loran-C and GPS), the chart plotter displays the current position, the speed and the heading of the boat and its track.

The chart plotter is extremely easy to use. Your ship's position, courses and distances can be easily calculated through the use of a simple keyboard. This information can then be stored on a floppy disk and can be recalled at any time. On the screen are shown navigation data and cartographic information obtained from electronic charts of **C-MAP** contained into **C-MAP** G-CARDS.

1.2 Software Specifications

The software supplies with the following features:

Recordable Points: Waypoint, Mark e Event total 3000

Routes	: Routes	3000
	Max n° waypoint per route	3000
	Target	1

Tracking	: Track	5
	Total track points	5000
Mark/Event	: User point alphanumeric identifier	
	Type user points	16

Cartographic Functions

- Worldwide Chart Coverage
- Depth, Distance and Speed unit selection
- Depths Area Limit
- Depth Limits & Soundings Range
- Natural Features, Rivers and Lakes, Cultural Features, Landmarks, Tides and Currents, Bathymetric Lines, Spot Soundings, Bottom Type, Ports and Services, Attention Areas, Tracks and Routes, Lights, Buoys and Beacons, Signals, Cartographic Objects, Names, Compass, Chart Generation, New Objects, Complex Object, Info Level, Lat./Lon. Grid, Chart Boundaries, Mark and Event Icons, User Points Identifier, Plotter Mode.
- WGS84 Coordinates System

Fix Functions

- Fix Correction
- Display Headings True or Magnetic
- Keypad entry to modify Fix correction
- Magnetic Variation user selection
- Filter Functions

Report Functions

- Route Data Report
- User Points List
- GPS Data Page
- Navigation Data Page
- Graphic Data Page

Special Functions

- Automatic Info on cartographic objects
- Port Info
- Goto Nearest
- Tide Info
- External Waypoint
- Simulation Mode
- M.O.B.

- Map Rotation
- EBL & VRM
- Timer
- Floppy disk

1.3 Basics

The chart plotter is controlled using 24 labeled keys and a trackball to move across the screen a cursor.

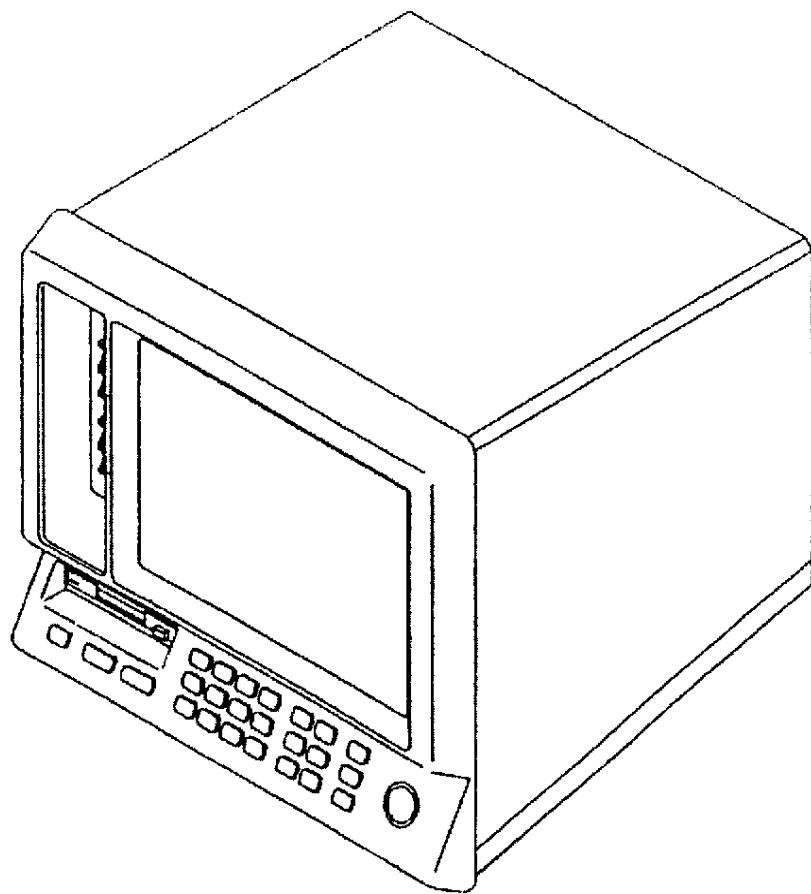


Fig. 1.3 - The monochromatic chart plotter

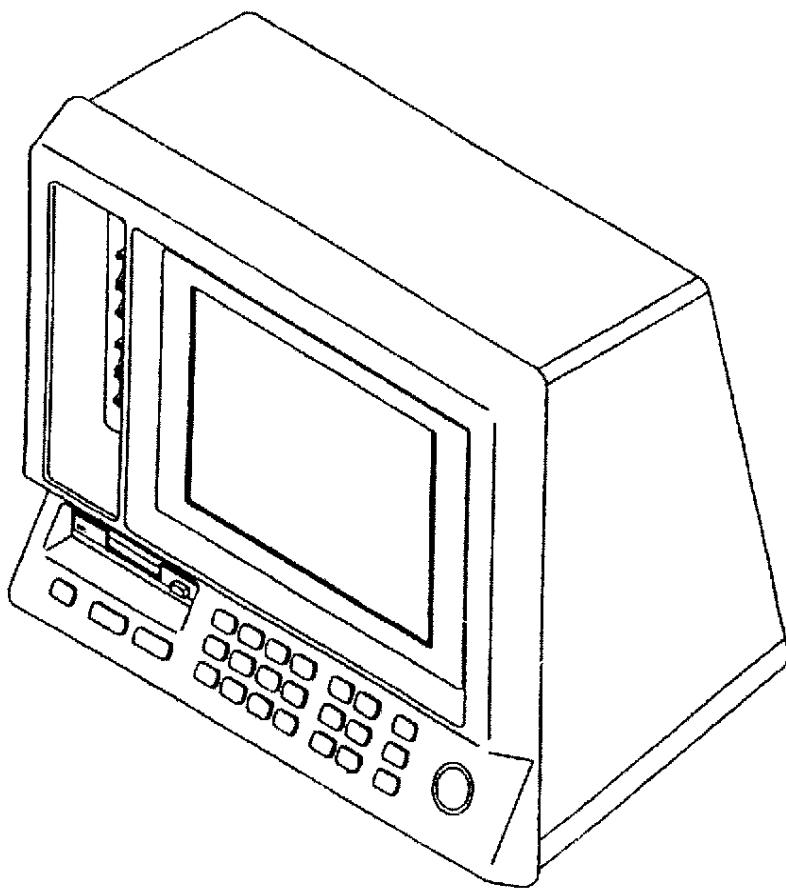


Fig. 1.3a - The color chart plotter

As you press a key, a single audio beep confirms the key action; every time the key press is not valid, three rapid beeps sound indicates that no response is available.

1.3.1 Conventions

Throughout this user manual, the keys are shown in capitals enclosed between single apices, for example 'MENU'; menu names, and all other messages shown on the screen are indicated in bold capitols, for example **MAIN MENU**.

Terms included in the glossary are shown in underlined type, for example Target.

Chapter

2

Getting Started

This chapter provides basic information to get you started using the chart plotter; it will help you to become familiar with the chart display and the functions of the controls before you start using the chart plotter for route handling and navigation. It also explains how to change the brightness and how to insert or remove the G-CARD and the floppy disk.

2.1 Turning the chart plotter On

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

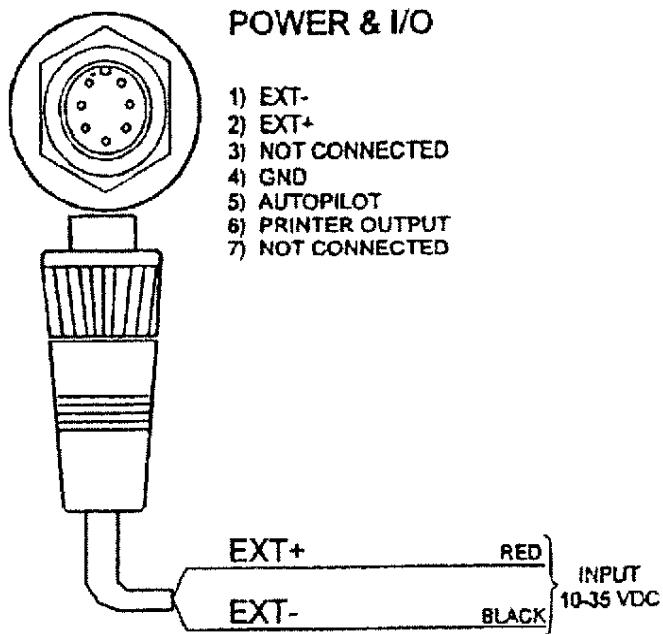


Fig. 2.1 - Power On

The chart plotter is turned On by pressing the 'POWER' key: after pressing the key the chart plotter emits a beep sound. The screen shows:

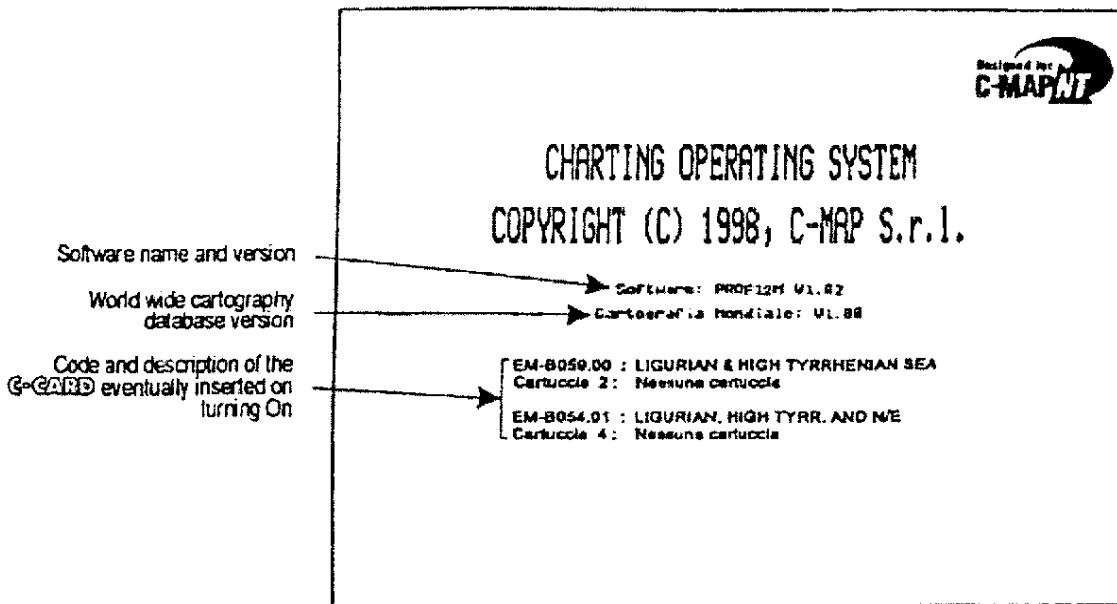


Fig. 2.1a - Initial page

Note

The software version is subject to change without notice. This manual is valid too.

Note for the color version

The software name is PROF12C.

After a few seconds, the first of the two Caution Notice pages (also called Warning pages) is displayed, reminding you that the chart plotter 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:

CAUTION

C-MAP electronic charts (ECs) are derived from geographical data - including official government charts - which we believe to be accurate. They are neither verified nor approved by Hydrographic Authorities. C-MAP ECs are designed only to ease and speed navigation calculations and so must not be relied upon as a primary source of navigation information, but rather a backup to the use of official government charts and prudent navigation habits.

There is no direct relationship between the color of water areas and their depth. The navigator shall always query the area for depth information and use the official paper charts.

Fig. 2.1b - Caution page (I)

Press the 'ENTER' key:

The ECs contained in this C-MAP product have been derived on agreement with the following Hydrographic Authorities :

-Istituto Idrografico della Marina (Italia)

Fig. 2.1c - Caution page (II)

Press the 'ENTER' key again to enter the cartography page.

2.2 Turning the chart plotter Off

To turn Off the chart plotter press and hold the 'POWER' key for a few seconds: the screen is deleted and the chart plotter is turned Off, leaving all the settings in backup.

2.3 The keyboard

Using the keyboard all operational functions are accessed:



Fig. 2.3 - The keyboard

Here is a brief description of the keys and their functions:

- 'POWER' : turns the chart plotter On or Off;
- 'DISPLAY DIM +/-' : controls the screen brightness;
- 'KEYPAD DIM +/-' : controls the keyboard brightness;
- 'PAGE/1' : selects the video configuration wrap around;
- '2' : numeric key "2" or moves cursor top;
- 'DATA/3' : numeric key "3" or enables the A-B, EBL, VRM and Timer functions;
- '4' : numeric key "4" or moves cursor left;
- 'HOME/5' : numeric key "5" or places cursor in the centre of the screen;
- '6' : numeric key "6" or moves cursor right;
- 'PLOT/7' : numeric key "7" or enables track recording functions;
- '8' : numeric key "8" or moves cursor bottom;
- 'MODE/9' : numeric key "9" or selects Charting or Navigation mode;
- 'ENTER' : selects the desired option;
- 'MENU/0' : selects the Main Menu;
- 'CLEAR' : exits from menu;

'MARK'	: places Mark on cursor position;
'ROUTE'	: allows routes and Waypoints management;
'USER'	: allows the floppy disk management;
'EVENT/MOB'	: places Event on ship's position and activates/deactivates the MOB function;
'GOTO'	: enables the Target function;
'HARD COPY'	: prints on paper the screen image;
'ZOOM IN'	: shows more details in a smaller area;
'ZOOM OUT'	: shows a wider and less detailed view;
'INFO'	: obtains information on cartographic objects.

Rolling the trackball (or by pressing the arrow keys when they are not used for other purposes) it is possible to move the cursor in the cartographic page or to select the desired option into a Menu or Pad Menu.

The cursor is displayed on the screen by the symbol:

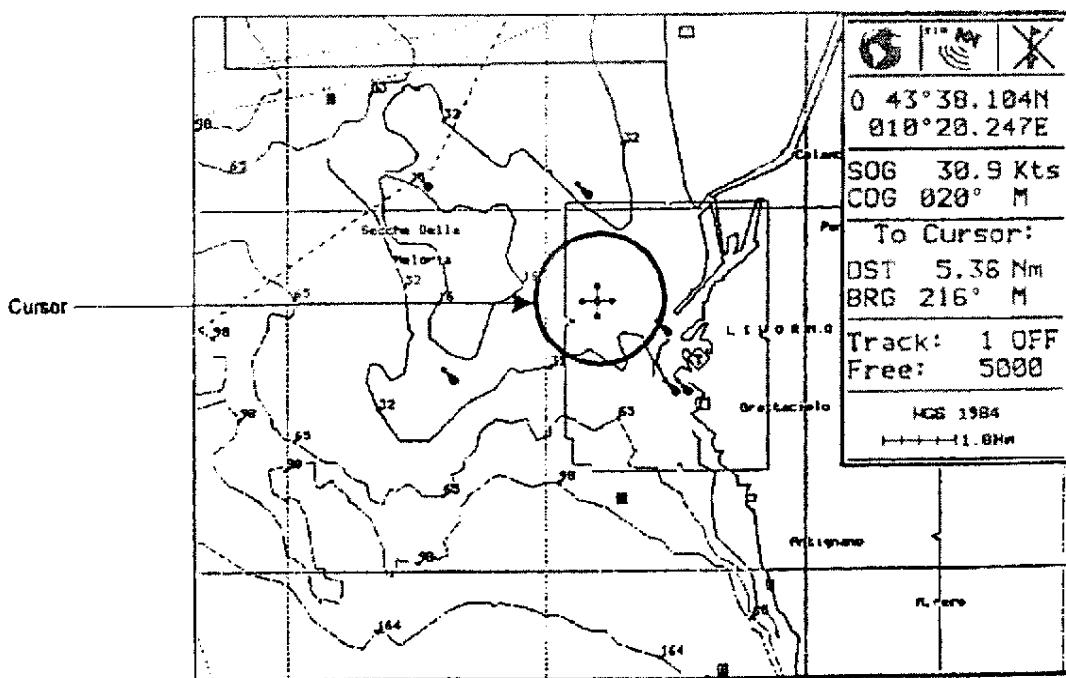


Fig. 2.3a - The cursor

When the cursor reaches one edge of the screen, the electronic chart will move smoothly under it (this function is called Automatic Pan). When the cursor is placed on cartographic object, an information window is opened (Automatic Info).

2.4 C-CARD Insertion

The chart plotter has a built-in world map. But during navigation you will need to use larger scale charts with detailed information. These are available using the **C-MAP NT** C-CARD data cartridges. The chart plotter allows you to install four of them at the same time, because there are four slots.

You can insert and remove C-CARDS while a chart is displayed; but you do not insert or remove C-CARDS while map is redrawing.

To insert the C-CARD, follow the procedure:

Inserting a C-CARD

- Check that the C-CARD is the correct format (**C-MAP NT** C-CARD) and that the required charts are stored on it.

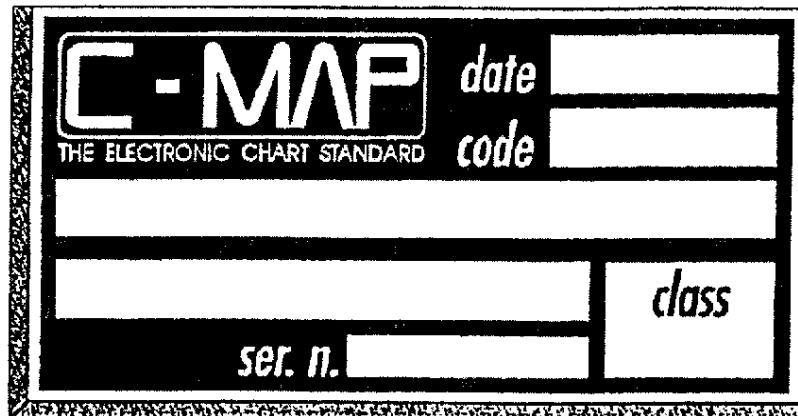


Fig. 2.4 - C-MAP NT C-CARD

- Hold the C-CARD by the short smoothed side so that you can see the "C-MAP" label (see Fig. 2.4).

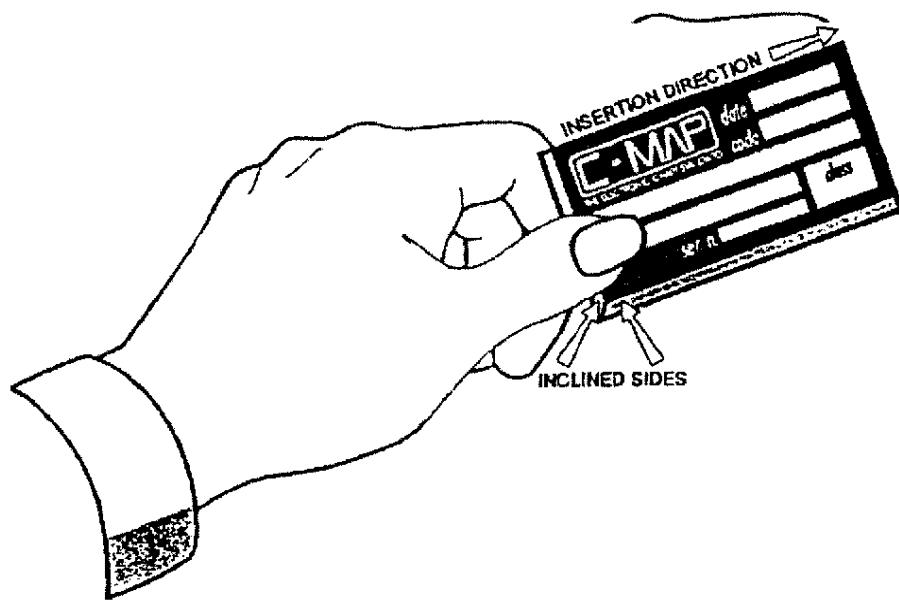


Fig. 2.4a - G-CARD insertion (I)

- Gently push the G-CARD into one of the available slots (1); push the G-CARD in as far as it will go, then move it to the right (2) to hold fixed into the slot (3).

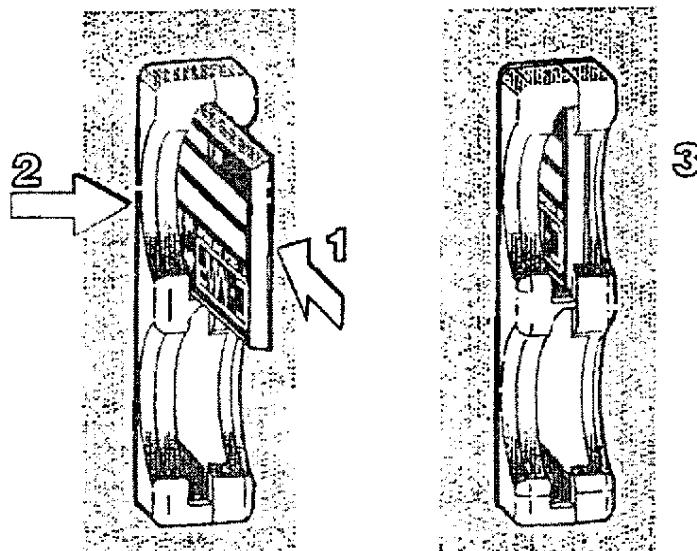


Fig. 2.4b - G-CARD insertion (II)

- The new cartography information will be displayed when you move the cursor into an area covered by the new charts making pan or zoom operations. The boundary of each chart digitized in the current G-CARD is shown as a rectangle (you may turn On or Off the chart boundaries display from menu - see par. 5.3.5):

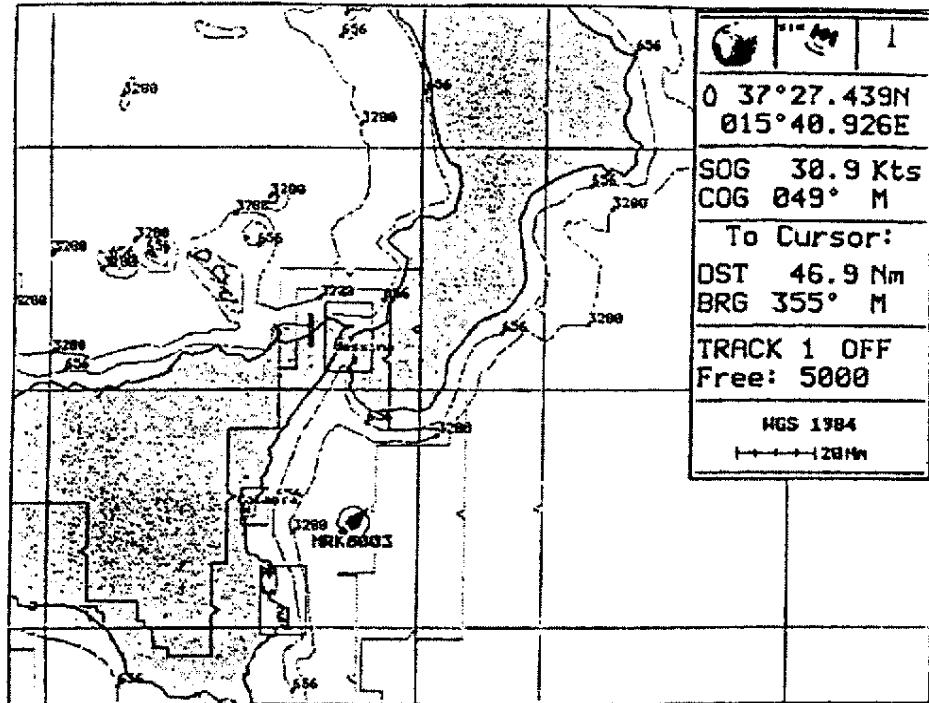


Fig. 2.4c - Chart boundaries (I)

Moving the cursor inside one of the chart rectangles and press the 'ZOOM IN' key. The cartography area is expanded so that you can see more detail:

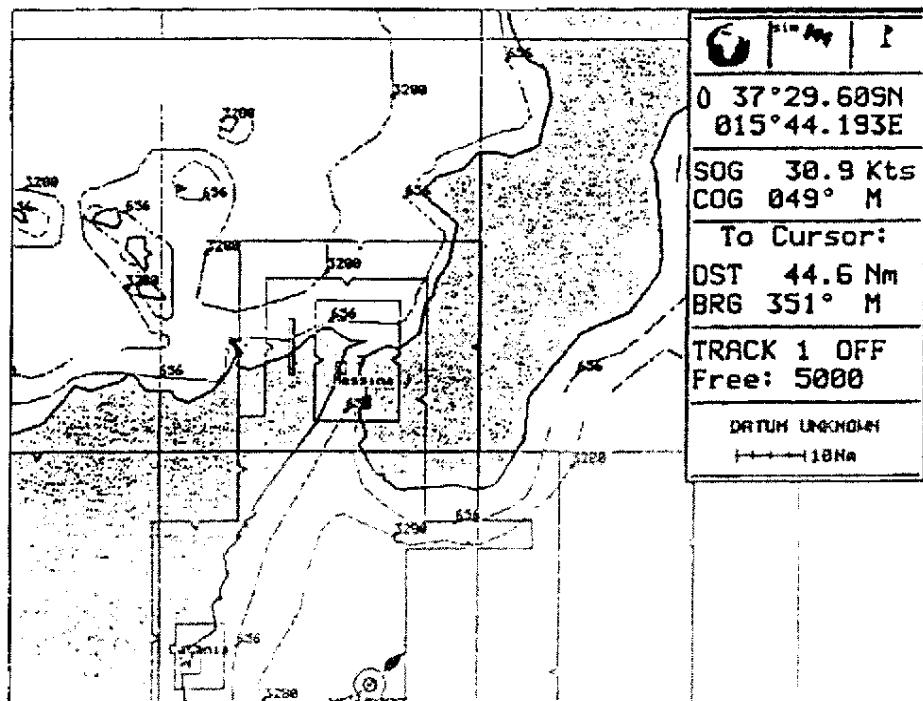


Fig. 2.4d - Chart boundaries (II)

To remove the G-CARD, follow the procedure

Removing a G-CARD

- Press lightly the G-CARD you wish to remove (1) and move it to the left (2) until you hear a click: the G-CARD will ejected out of the slot (3).

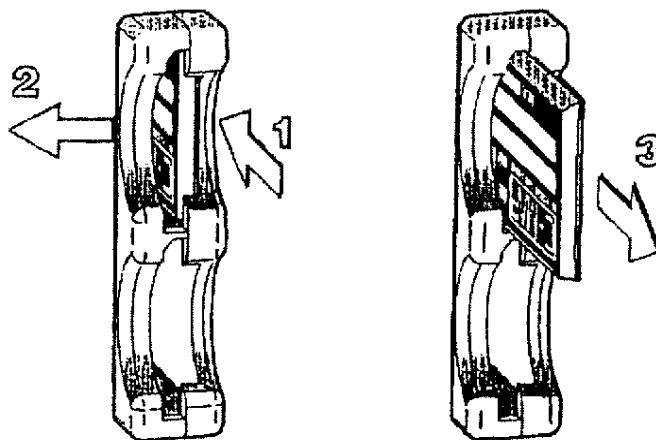


Fig. 2.4e - Removing G-CARDs

Note

If you insert in the chart plotter a marine G-CARD and a terrestrial G-CARD and you are using the terrestrial one prevailingly, insert the terrestrial G-CARD in the left slot to obtain a better cartography display.

2.5 The floppy disk

The floppy disk drive is used by the chart plotter to save user data; it is the most convenient medium for storing and retrieving your information.

The 3.5" floppy disk has rigid plastic cover with metal shields that guard the disk from dirt and fingerprint.

You can "write protect" the floppy disk to preserve the accidental storage of information on disk. The floppy disk has a write protect notch; this notch can be covered with a built-in tab. If the write protection notch is covered by the tab, no data can be written (saved) to the floppy disk.

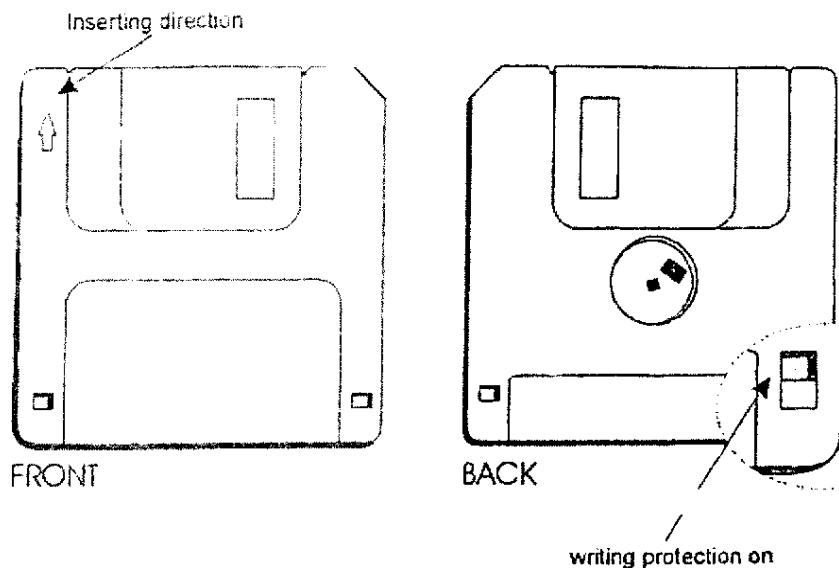


Fig. 2.5 - Floppy disk

You should store floppy disk in a safe place, away from dust, moisture, magnetism and extreme temperatures.

Be sure to label each floppy disk you use, since labels help you identify what data is on the disk and remind you that the disk has information stored on it.

Before a new floppy disk can be used, you must format it, by selecting the format disk option provided by the chart plotter (see Cap. 6). This function initializes the floppy disk and prepares it for storing information. Remember that if a disk is not blank, formatting it destroys any data already on the floppy disk.

Warning !!!

The floppy disks must be formatted in order to be reused, considering though that with this operation all data memorized on the floppy disk will be lost.

Inserting a floppy disk

- To correctly insert the floppy disk into the drive, take the disk so that the arrow impressed on the plastic cover faces the top and points to the drive (see Fig. 2.5).
- Gently push the floppy disk into the drive (1): if the drive seems to offer resistance to the disk, immediately stop and verify that

nothing obstructs the transit into the drive and make sure to have the disk correctly facing to the top. To try again to insert the floppy disk: if there are problems, contact your dealer (never force the disk into the drive).
Insert the floppy disk into the drive until you hear a "click".

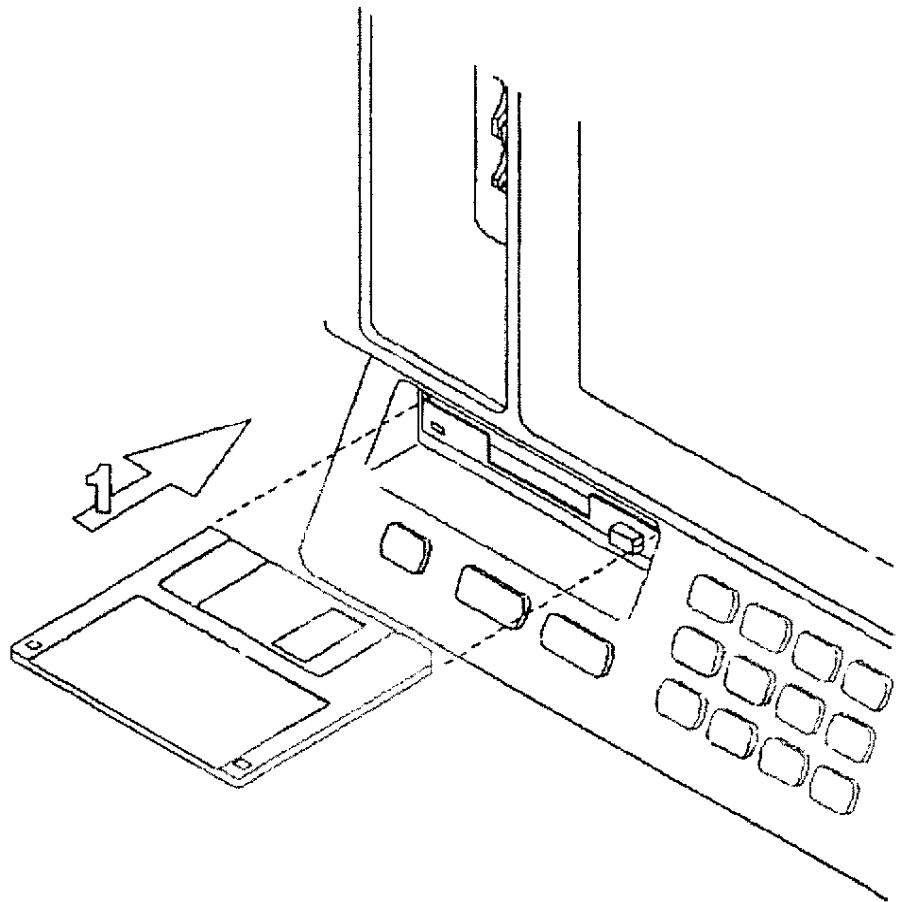


Fig. 2.5a - Inserting of floppy disk

Removing a floppy disk

- To remove the floppy disk from the drive, press the key under the slot: the disk will exit partially so that it is possible to extract it from the drive (2).

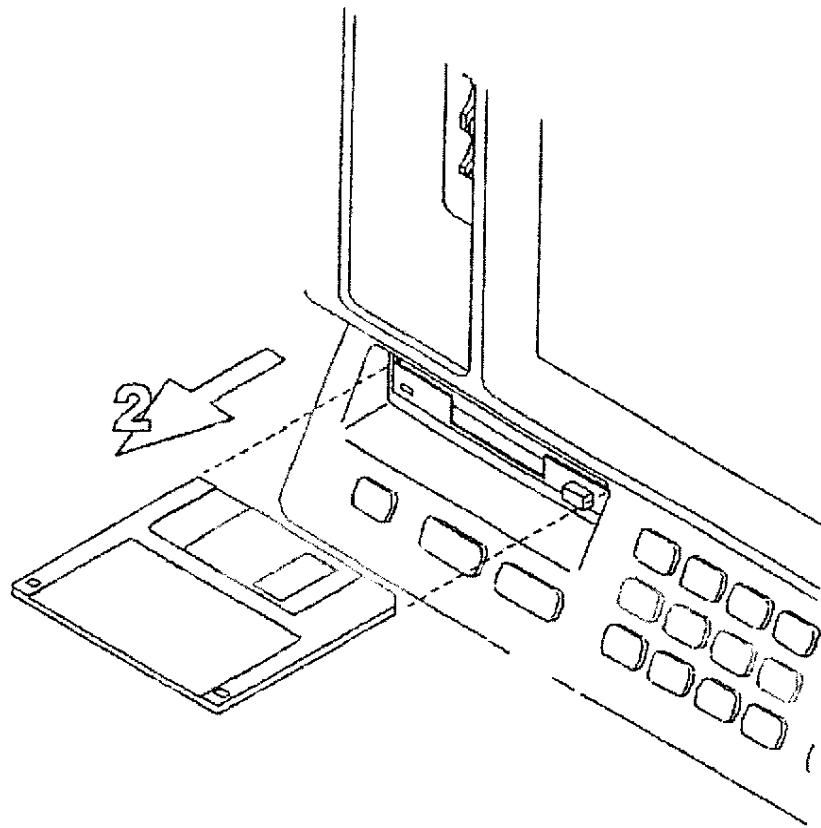


Fig. 2.5b - Removing of floppy disk

2.6 Adjusting the Brightness

You can modify the intensity of the backlight and contrast to make reading easy and comfortable.

By the key 'DISPLAY DIM +/-' it is possible to increase or decrease the brightness: each time you press the key "+", the light value is increased to the max value, if you press the "-", light value is decreased to the min value.

Note for color chart plotter

For the color chart plotter the 'DISPLAY DIM +/-' key controls the video backlight. Warning: At low temperatures the CCFL backlight may not glow properly. Allow a few minutes to warm up.

The keyboard brightness can be controlled in similar mode by the 'DIM KEYPAD +/-' key.

2.7 Setting Receiving Port and Format

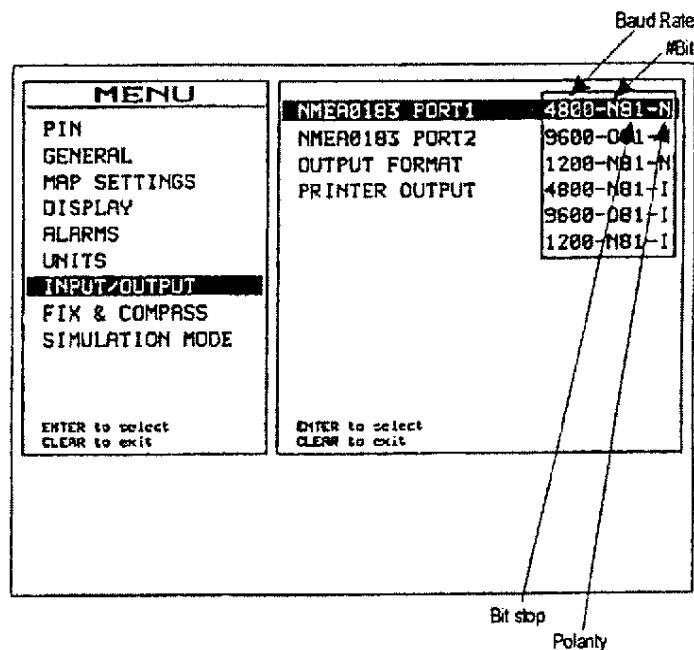


Fig. 2.7 - Receiving GPS Setting

Select the proper input format for the NMEA-0183 positioning device in use and set per proper part.
(Refer to the par. 5.7 for setting of the desired format).

Chapter

3

Direct Functions

The Direct Functions are functions activated by a dedicated key, allowing you to activate immediately a function.

3.1 The 'PAGE/1' key: screen display configuration

The screen display can be shown in 7 different modes, with charts and text area or only with data pages. To select the configuration you wish press the 'PAGE/1' key:

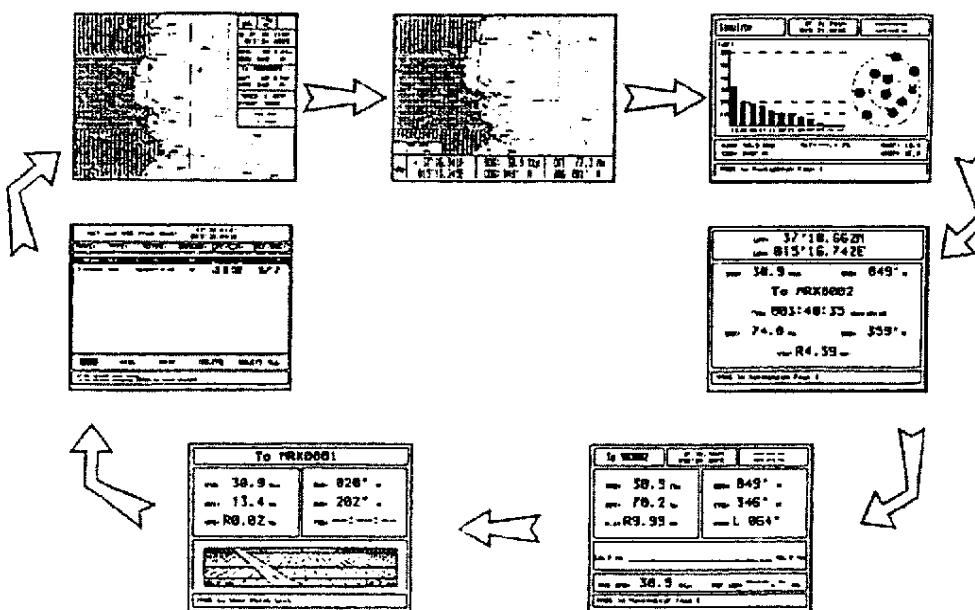


Fig. 3.1 - The 'PAGE/1' key

3.1.1 Charts and Text Area

Text Area can be shown on the screen in two different modes:

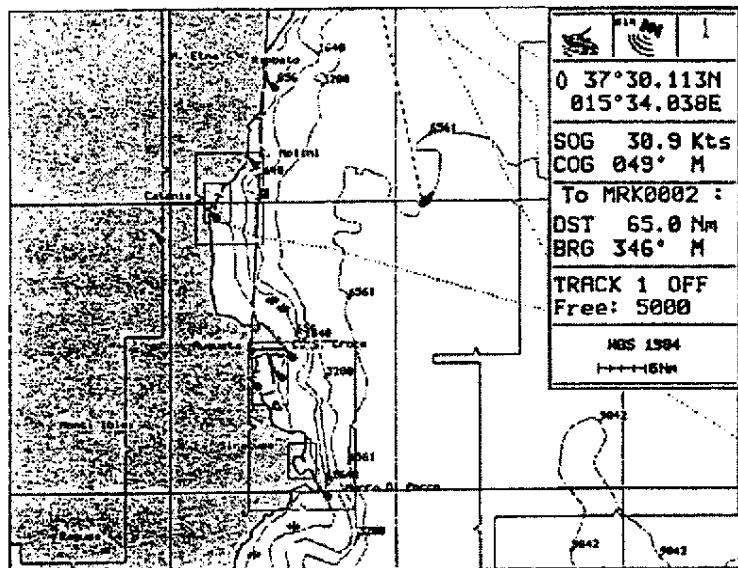


Fig. 3.1.1 - Text Area (1) at right side of the screen

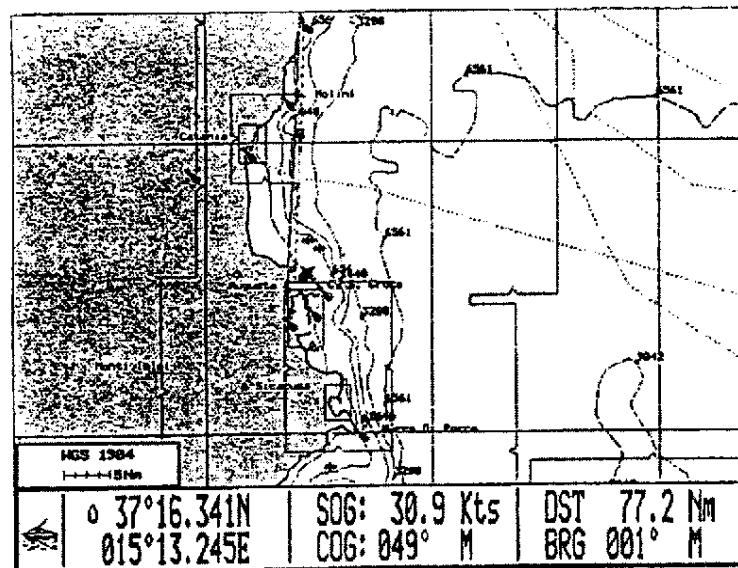


Fig. 3.1.1a - Text Area (2) at the bottom of the screen

In each mode the display data are:

- icons: in (1) the top first left indicates the Charting (world icon) or Navigation (boat icon) mode; the central one shows the GPS indication (simulation, GPS, DGPS): when the status is "not good" the icon is crossed; the rightest one if there is a Target set (flag icon) and if the autopilot output is enabled (arrow icon): when there is no Target, the icon is crossed.
- In the (2) configuration the three icons (shown in the left bottom corner) cycle.
- cursor (in Charting) or ship (in Navigation) coordinates.
- information on speed (SOG) and route (COG) of the ship.
- information on the distance (DST) and bearing (BRG) to the cursor.
- only in (1) configuration there are three possible types of information setting by the menu (MENU + GENERAL, see par. 5.2): i) information on active track and memory free; ii) information on EBL and VRM; iii) information on time and timer.
- chart scale and the selected datum. If the displayed map is in Local Datum, the message "Local Datum" is shown.

3.1.2 GPS Data Page

The GPS Data Page is opened at whole screen:

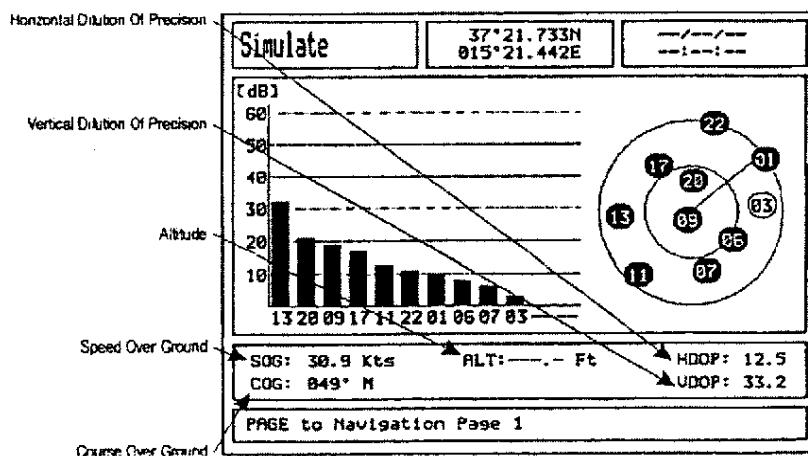


Fig. 3.1.2 - GPS Data Page

In the right side of the page is shown the satellites position, where each satellite is indicated by a number. The bars in the graph give you an indication of what satellites are visible to the receiver and the signal quality. At least four signals are necessary to receive an accurate ship's position, which coordinates are shown in the top of the page, with the date and time.

3.1.3 Navigation Data Page I

The Navigation Data Page I is opened at whole screen:

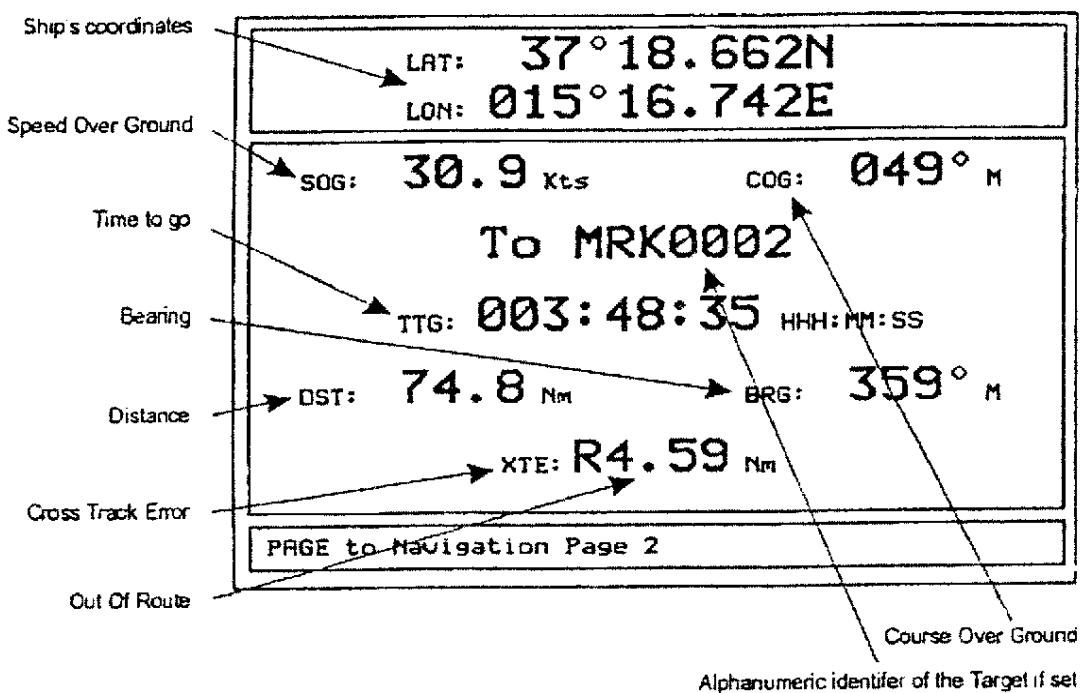


Fig. 3.1.3 - Navigation Data Page (I)

3.1.4 Navigation Data Page II

The Navigation Data Page II is opened at whole screen:

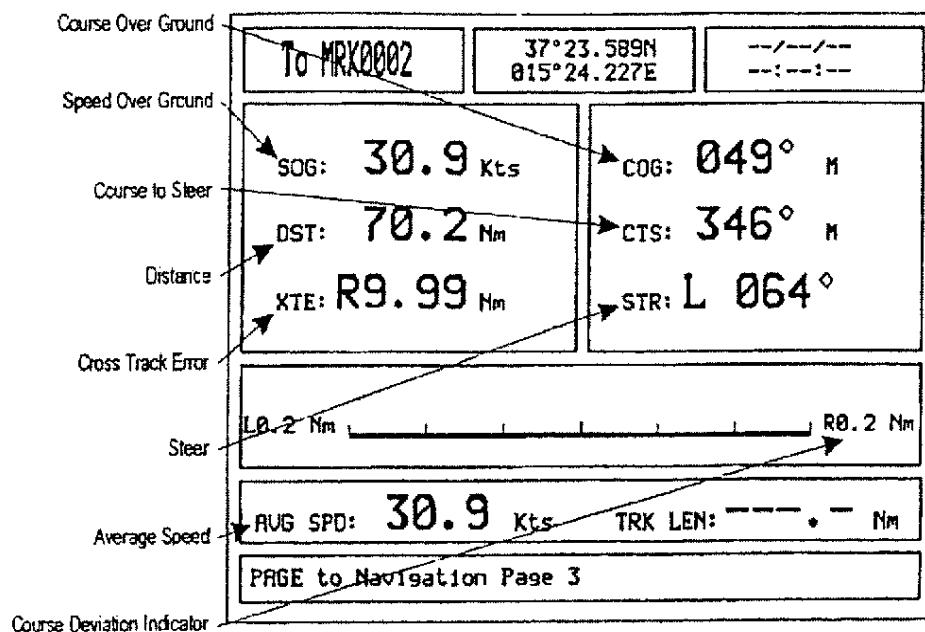


Fig. 3.1.4 - Navigation Data Page (II)

3.1.5 Graphic Data Page

The Graphic Data Page shown in graphic mode navigation data; this page is opened at whole screen:

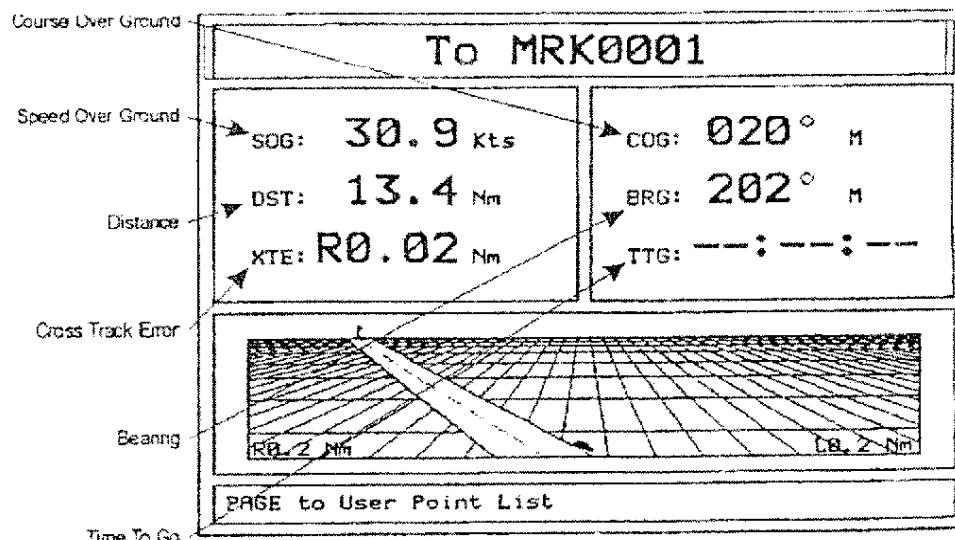


Fig. 3.1.5 - Graphic Data page

3.1.6 User Points List Page

The User Points List Page shows a full screen window, that gives information about all stored user points (Marks, Events and Waypoints). For each point are shown: the symbol, the identifier, the Latitude and the Longitude, the distance and bearing from the cursor (if in Charting) or from the ship's position (if in Navigation). By moving up and down the trackball it is possible to select the user point you wish. If there are more than 10 user points, to display the list follows in the next pages.

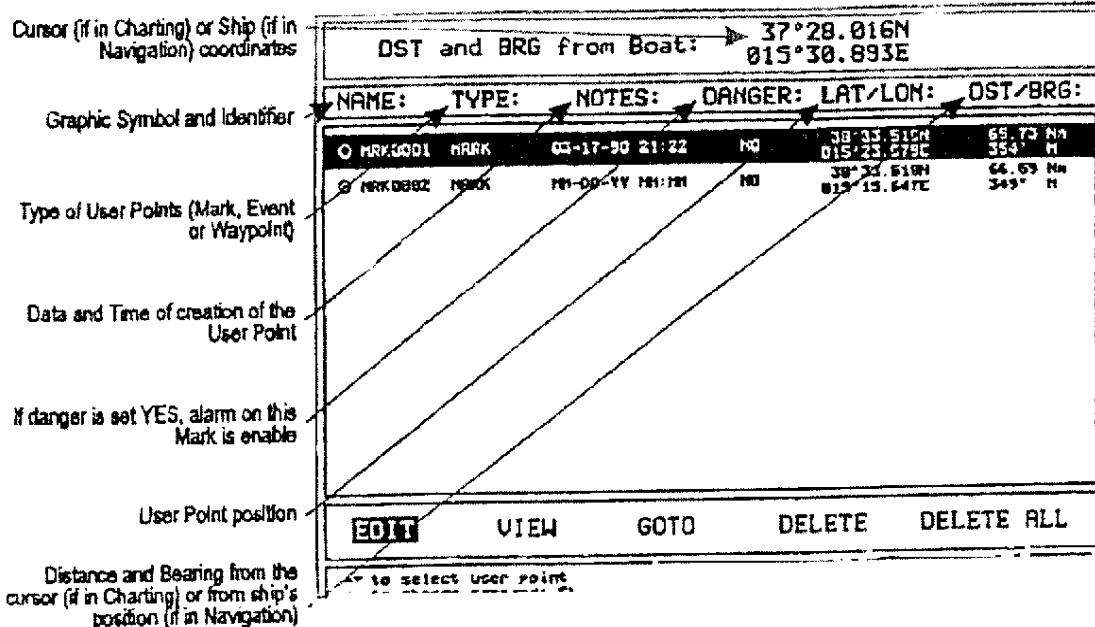


Fig. 3.1.6 - User Points Menu

- EDIT** : changes the selected point. After pressing the 'ENTER' key, a window is opened to allow to modify the user point. See par. 4.2.1.
- VIEW** : displays the selected point. After pressing the 'ENTER' key, the chart plotter exits from the User Points page and redraws the chart, showing the selected point, with the cursor placed on it: the window that contains the coordinates, the symbol and the identifier of the user point (info window) is opened on the screen. Press 'CLEAR' to exit from charts and returns to the User Points List page.
- GOTO** : sets the Target on the selected user point.
- DELETE** : deletes the selected point. After pressing the 'ENTER' key, a Warning message is shown on the screen, selecting YES to confirm deletion.

DELETE ALL	deletes all the existed user points. After pressing the 'ENTER' key, a Warning message is shown on the screen, selecting YES to confirm deletion.
-------------------	---

3.2 The 'MODE/9' key: Operation Mode

The chart plotter features two different operating modes: Charting and Navigation. To select the desired mode press the 'MODE/9' key. By pressing this key more times, the two modes are selected wrap around.

3.3 The 'ZOOM' keys: change of scale

The Zoom functions allow the user to select the desired scale of the charts by "zooming in", to display larger scales (more details of a smaller area), and by "zooming out", to display smaller scales (fewer details of a larger area).

Please note that in Navigation mode, the chart plotter will show the area around the ship's position, while in Charting mode it will show the area around the cursor.

3.4 The 'INFO' key: information on cartographic objects

By the 'INFO' key you can obtain detailed information for any object presents on the charts as explained in the next paragraphs.

3.4.1 INFO Function

After pressing the 'INFO' key, if in the range of the cursor there is present a cartographic object, a page is opened at whole screen where a list of all objects (in a tree structure), found in the range of the cursor, is displayed.

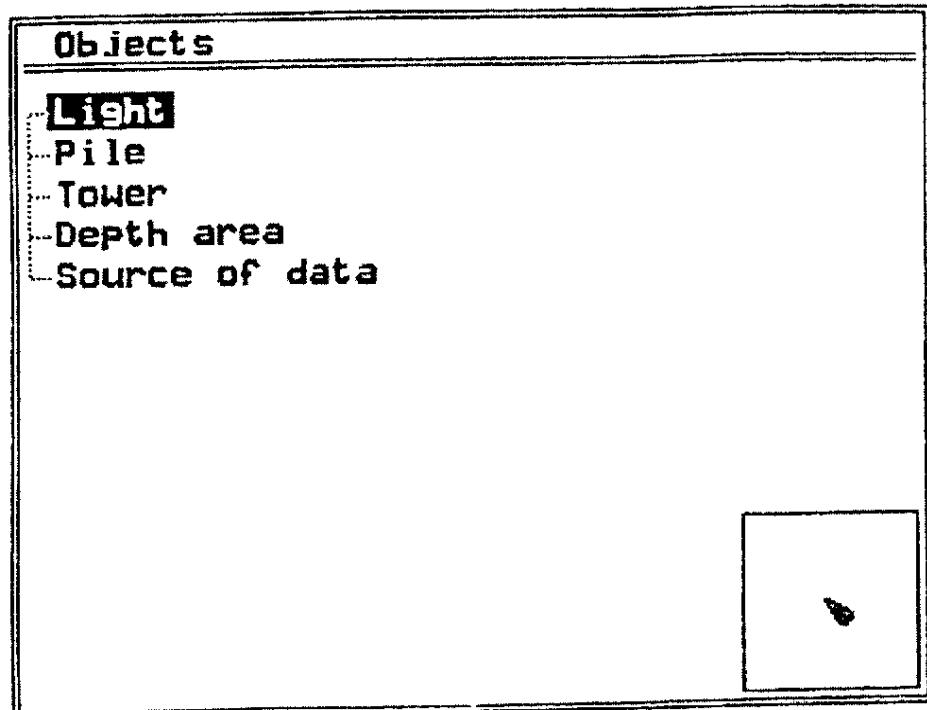


Fig. 3.4.1 - Info on cartographic objects

Select the desired object that appears in reverse video screen. In the right bottom a window contained the icon of the selected object is opened. By pressing 'ENTER' on the screen appears:

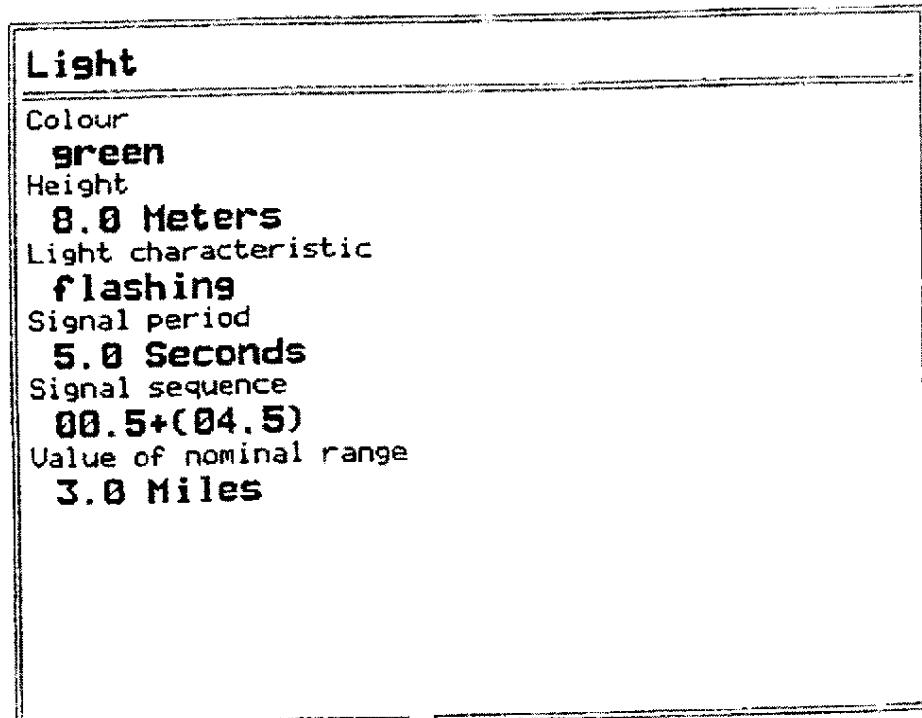


Fig. 3.4.1a - Info on selected object

If the information is contained in several pages, to select the following pages rotate the trackball down.

To return to previous page and to exit from info page press the 'CLEAR' key.

Placing the cursor over a cartographic object the automatic info window (called also Quick Info) is opened on the screen:

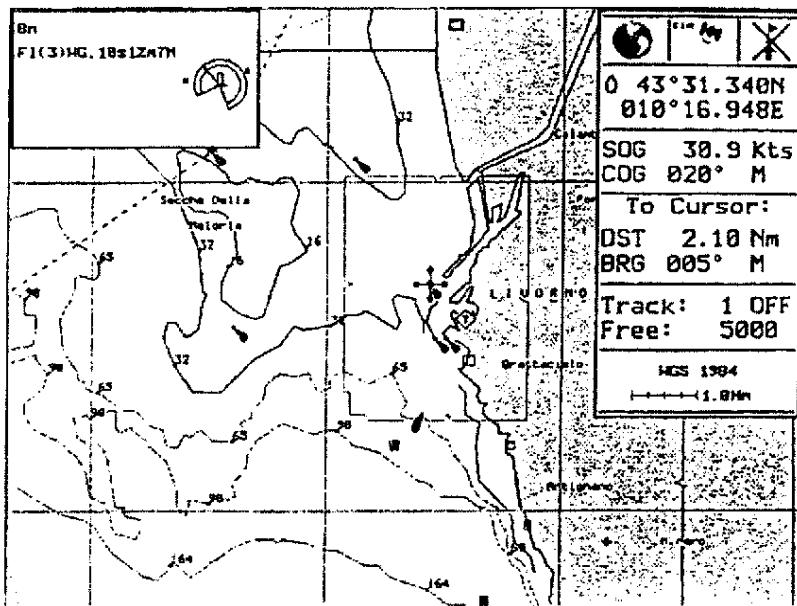


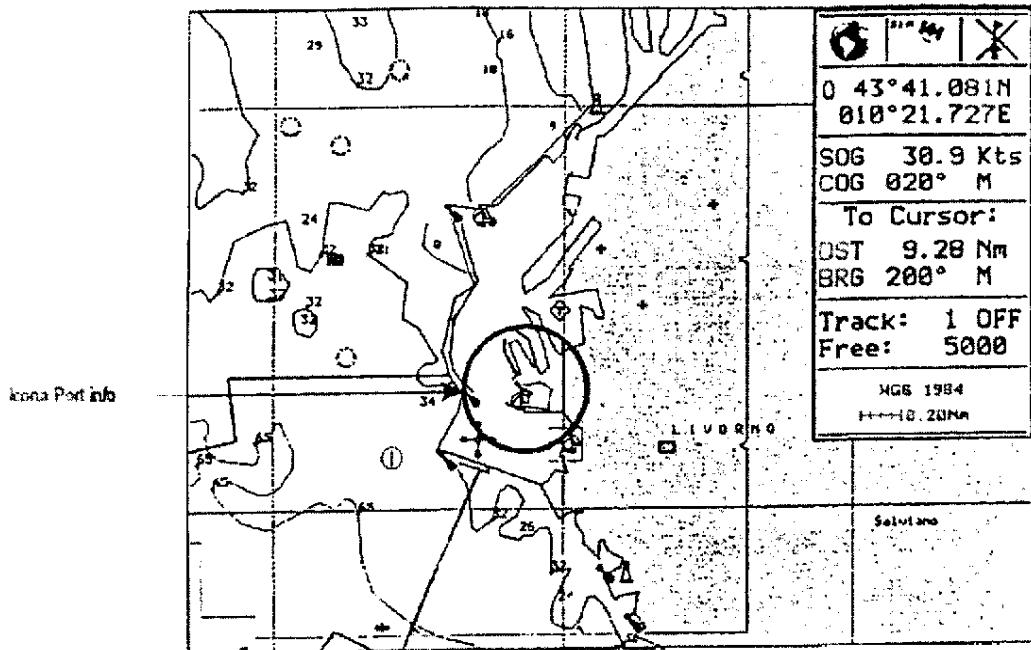
Fig. 3.4.1b - Automatic Info

If the object is complex, a short info is displayed. To obtain all information press the 'ENTER' key (see fig 3.4.1).

3.4.2 PORT INFO

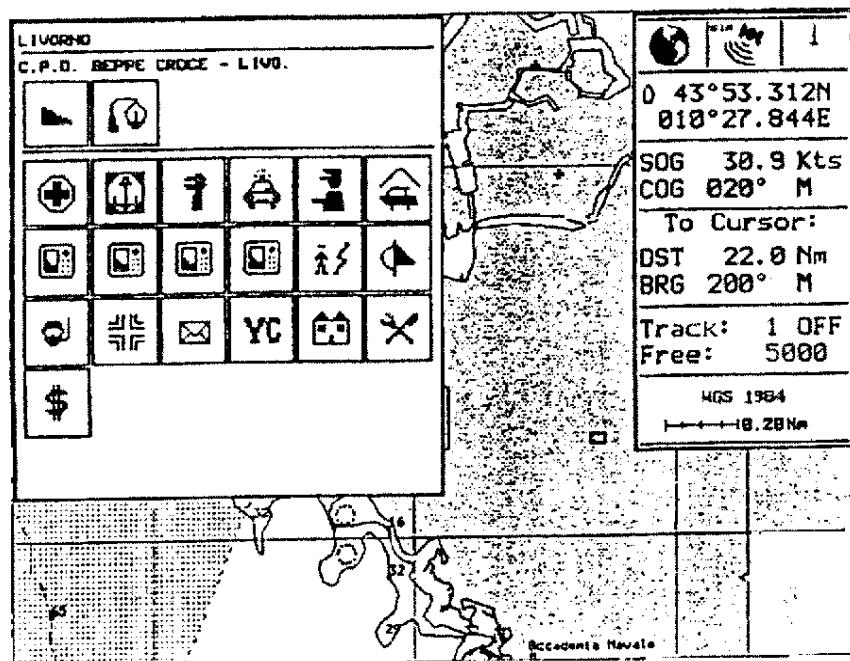
The Port Info function is a combination of a new Port Info database of all the relevant Safety and Navigational information normally found in good pilot books and a new presentation software which displays special Port Facility Symbols.

Upon viewing the chart of a port or harbor, the user is presented with 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 in the NAV AIDS menu is set ON - see par. 5.3.3.



The table below shows the QIC icon presence:

INFO LEVEL	DETAIL	ICON PRESENT
CO	bl	



or it is expanded in the "Full Info" window to obtain a detailed information on the service (as the opening and closing time of the Fuel station, the telephone number of the Health emergency, and so on). To do it press the 'ENTER' key:

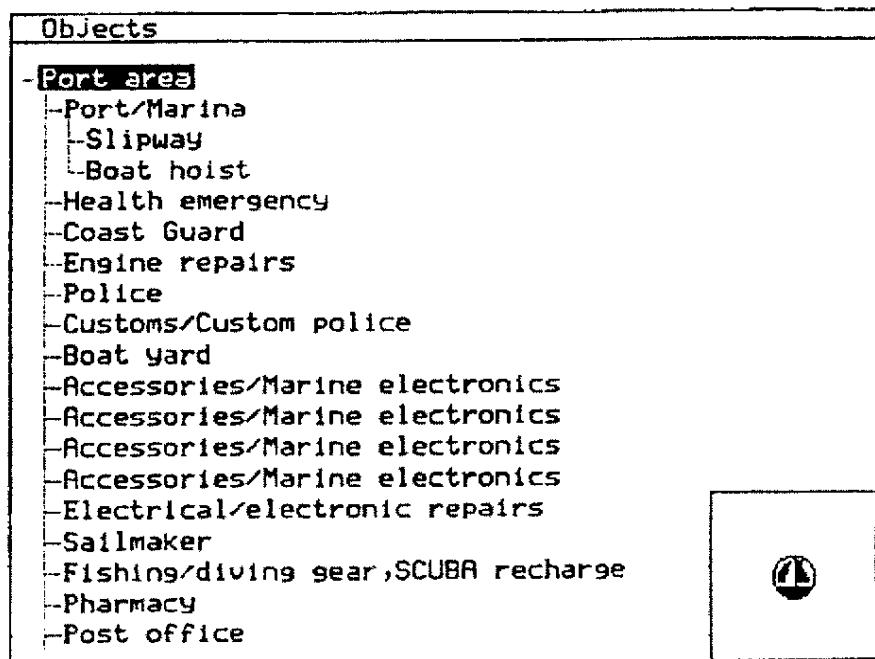


Fig. 3.4.2b - "Full Info" (I)

Press the 'ENTER' key:

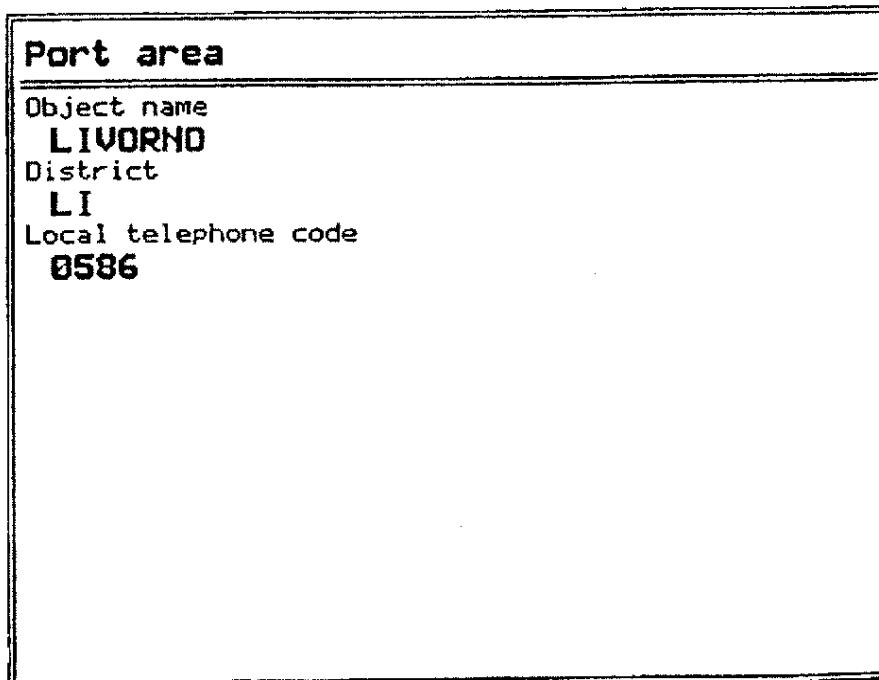


Fig. 3.4.2c - "Full Info" (II)

For any countries, where such information exists on the paper chart, the user is also presented with accurately positioned symbols which show where many useful facilities are located.

3.4.3 GOTO NEAREST feature

This feature allows users to locate and display the nearest available facilities of a particular type (i.e. the nearest Hospital, sailmaker, bank, etc.). Pressing the 'INFO' key for more than 1 second, on the screen the icons list of the available services is shown:

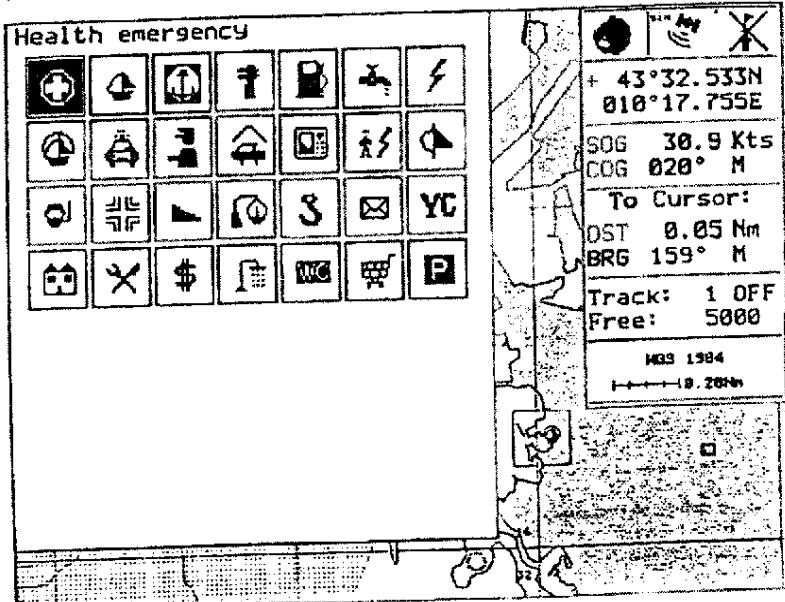


Fig. 3.4.3 - Goto Nearest Feature

Press 'ENTER': on selecting one, the list of the nearest ports (up to 10) in which this service is present is shown on the screen; the users can choose the facility location they want and the chart plotter will display its position on the chart.

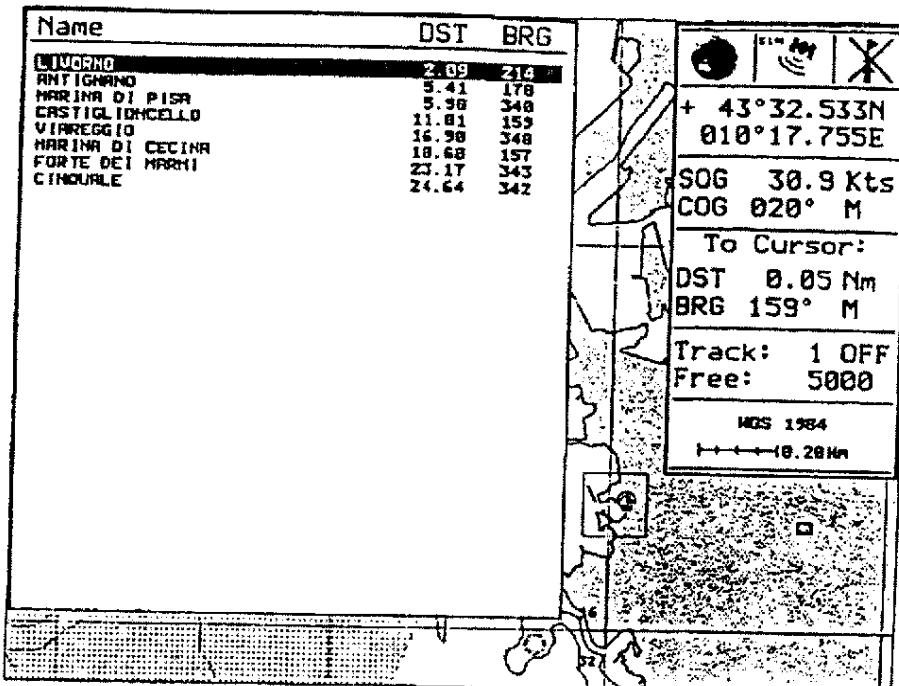


Fig. 3.4.3a - List of the nearest ports

Press the 'ENTER' key:

The figure shows a detailed information window for a selected service. The title is "Health emergency". The service name is "PUBBLICA ASSISTENZA" and its phone number is "0586-680640".

Health emergency

Object name
PUBBLICA ASSISTENZA
 Telephone number
0586-680640

Fig. 3.4.3b - Info on selected service

Press the 'CLEAR' key to exit.

3.4.4 TIDE INFO

The Tide Info feature is the combination of a new tide heights database that will be included within new G-CARDs and new features which calculate the tide graph for all primary and secondary ports world-wide. This function can calculate the tide heights for any past or future date and as a by-product of this calculation will also display the Maximum and Minimum Tide height and time for the day selected plus the times of Sunrise and Sunset. At some chart levels, the chart plotter will display a new Tide Diamond Symbol for every Port or tide point in the database covered by that particular G-CARD.

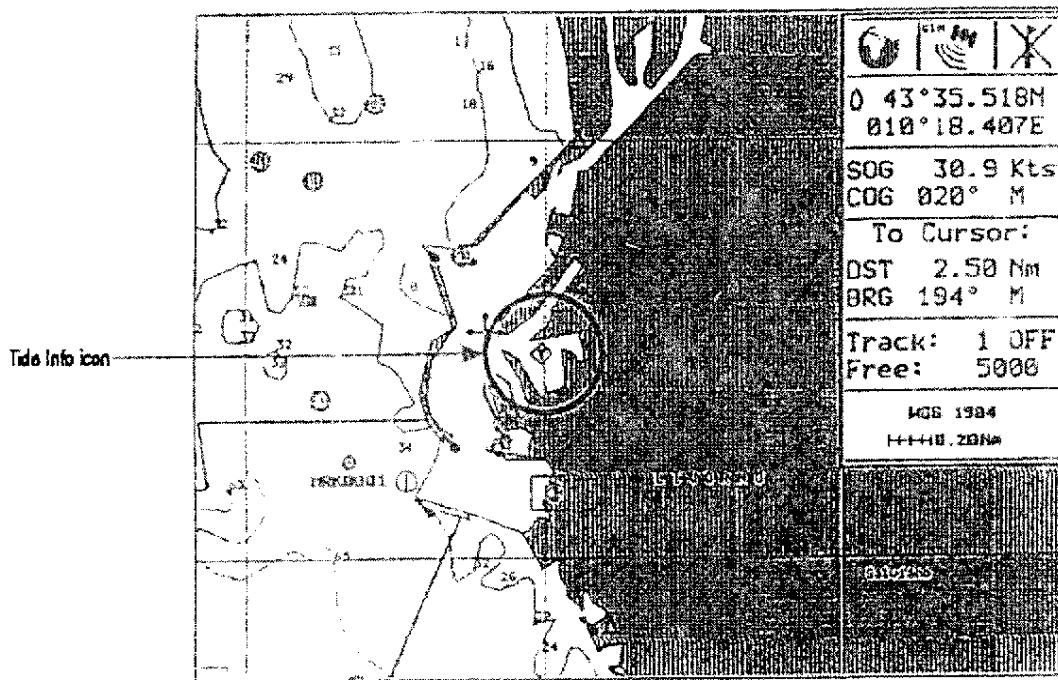


Fig. 3.4.4 - Tide Info icon

Place the cursor on this symbol, a "quick info" window is opened

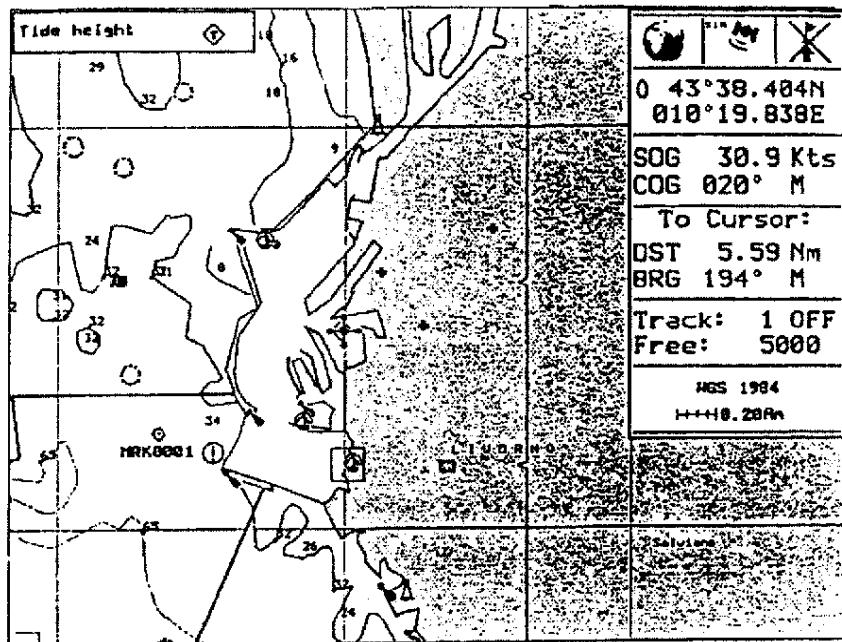


Fig. 3.4.4a - "Quick Info" window on Tide Info

To display the "Full Info" page press the 'ENTER' key:

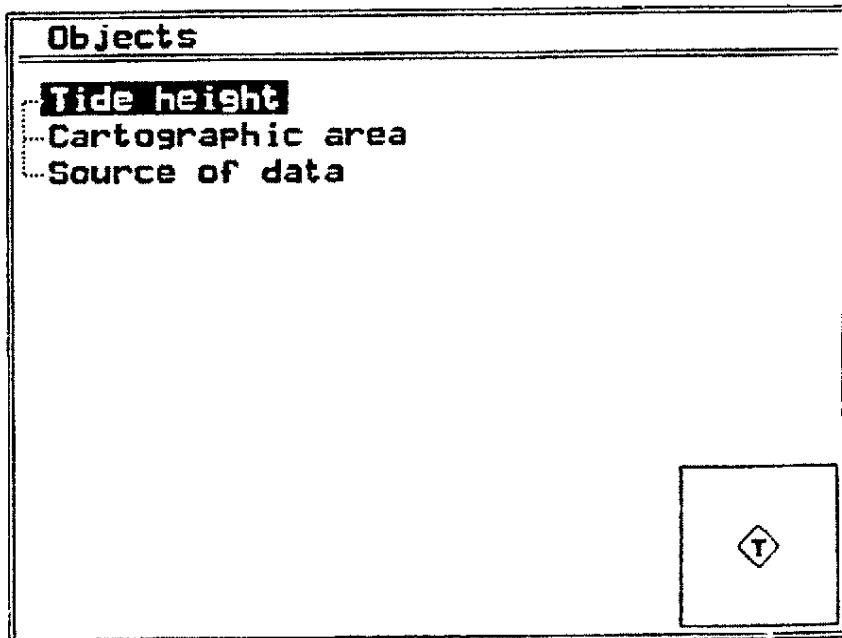


Fig. 3.4.4b - "Full Info"

After pressing the 'ENTER' key, on the screen the Tide graph appears:

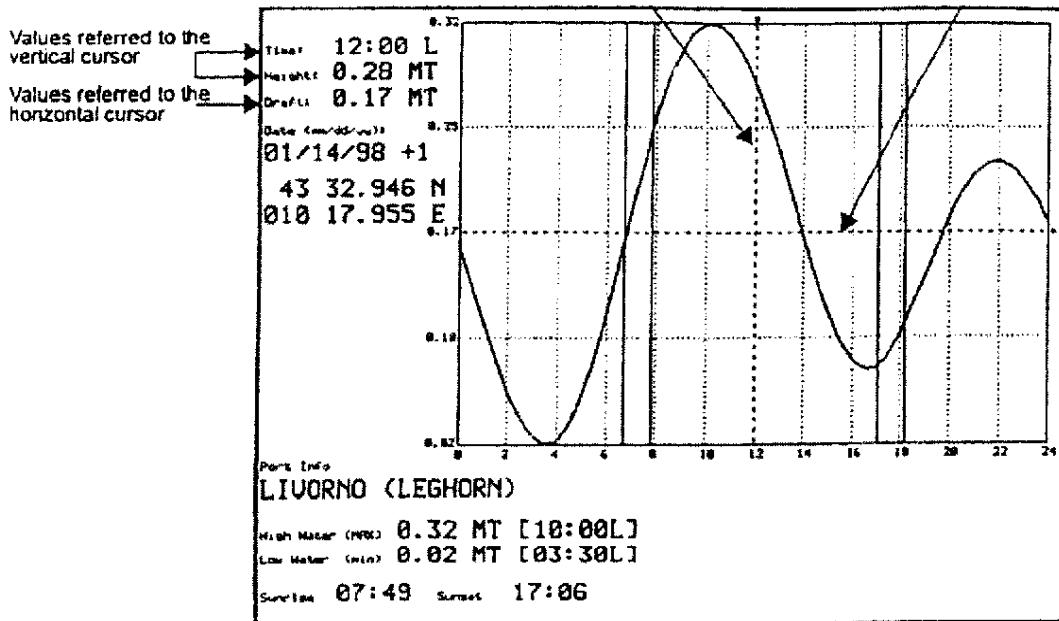


Fig. 3.4.4c - Tide Graph

Using the cursor control, it is possible to position an X,Y cursor anywhere on the graph and display the time at which it is possible to enter a harbor based on the boats draft.

3.5 The 'EVENT/MOB' key

By the 'EVENT/MOB' key it is possible to insert an Event, a marker directly on to the ship's position.

3.5.1 Inserting EVENT Function

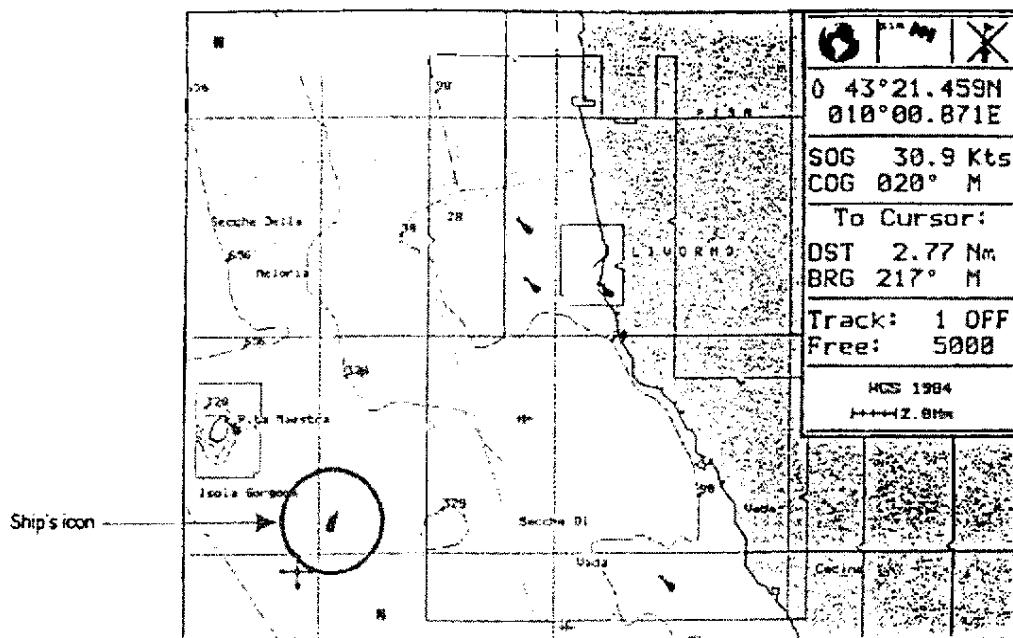


Fig. 3.5.1 - Ship's position is shown on the screen

Press the 'EVENT/MOB' key. A symbol appears on the screen, marking the boat's position.

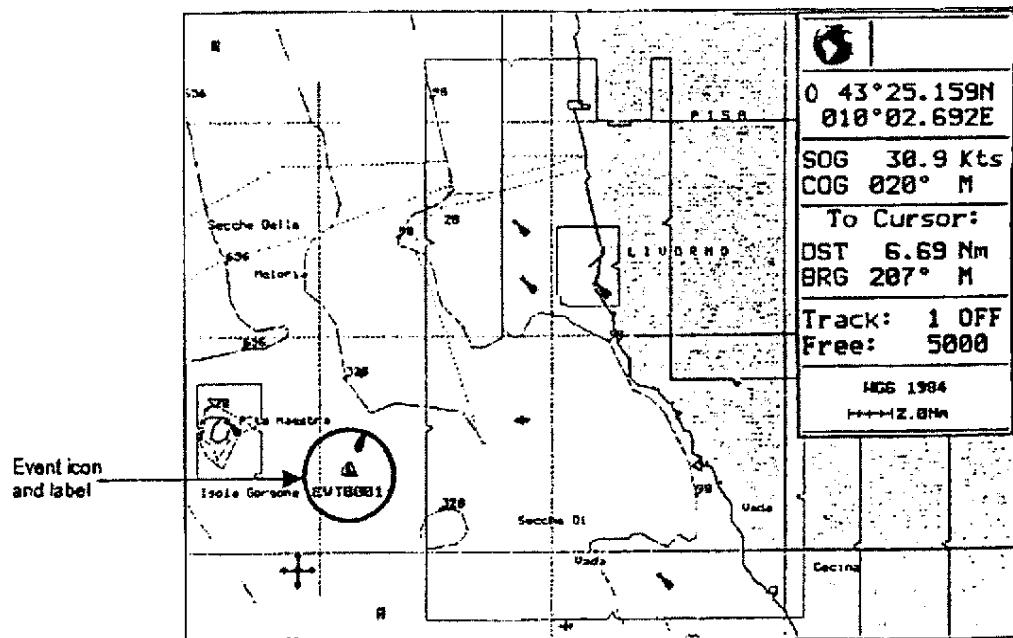


Fig. 3.5.1a - Event

3.5.2 Deleting EVENT Function

You can delete an Event by selecting the User Points List Page (see par. 3.1.6).

3.5.3 Man Over Board (MOB) function

To set the Man Overboard press the 'EVENT/MOB' key for more than 1 second: the symbol that identifies the MOB is placed at ship's coordinates and when the cursor is placed on this symbol, the info window with the MOB coordinates is shown:

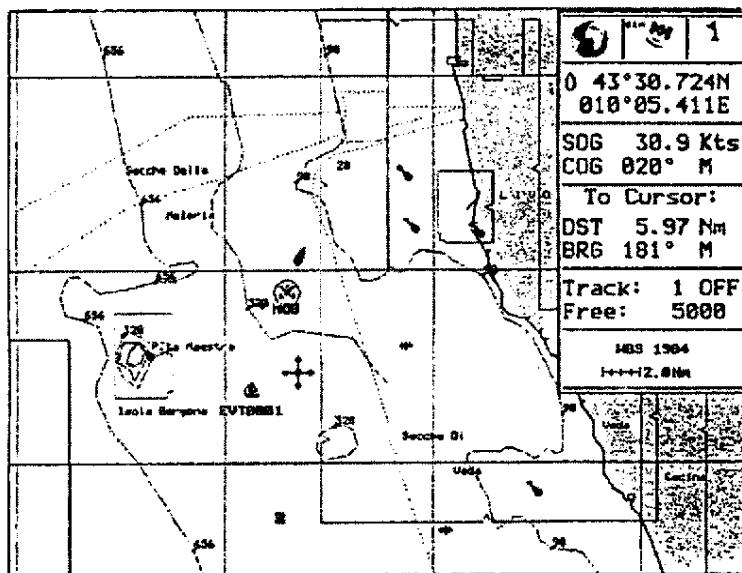


Fig. 3.5.3 - The MOB function

To activate navigation to MOB, place the cursor on MOB and press the 'GOTO' and insert the Target.

To delete the MOB, press the 'EVENT/MOB' key for 2 seconds: the MOB and the dotline disappears from the screen. If navigation to MOB is activated, before you must disable the navigation first.

3.6 The 'HARD COPY' key

The user can print on paper the screen image, if the chart plotter is properly connected with a printer (see par. 5.7 and par. 7.5 for more information).

3.6.1 Print screen on paper

To activate the print screen function press the 'HARD COPY' key:
to abort print screen press the 'CLEAR' key.

3.7 The 'HOME/5' key

By pressing the 'HOME/5' key it is possible to place the cursor in the centre of the video screen.

Chapter

4

The Pad Menu

The Pad Menu are "small" menus, activated by a dedicated key, opened in a window in a right bottom window of the screen. To close any Pad Menu press the 'CLEAR' key.

4.1 The 'DATA/3' key

The 'DATA/3' key allows you to select a Pad Menu with 4 options:

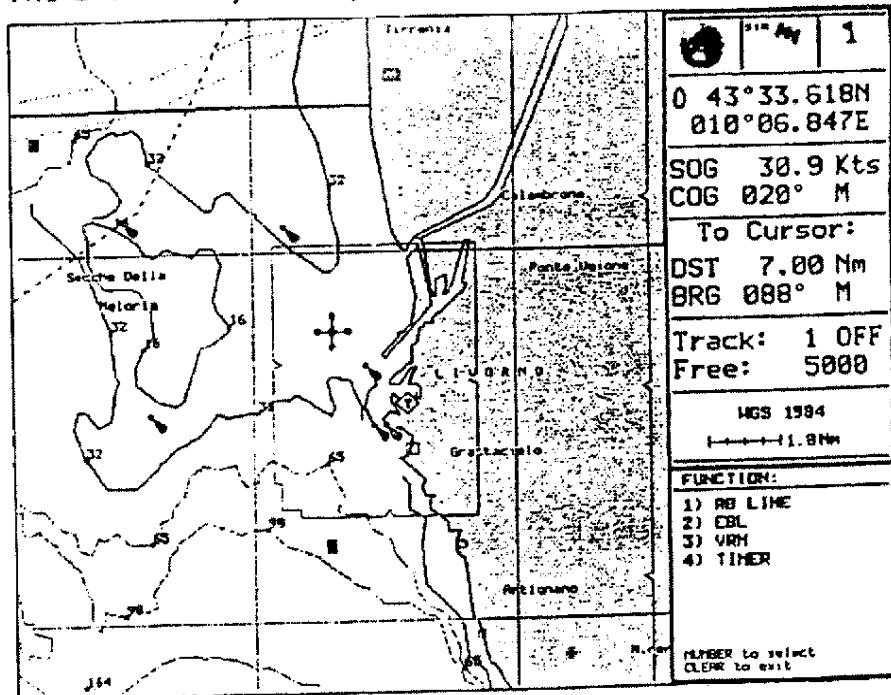


Fig. 4.1 - 'DATA/3' Pad Menu

4.1.1 A-B Function

By pressing the 'PAGE/1' it is possible to activate the A-B function, which allows you fast and easy measurements of distance and bearing between two points.

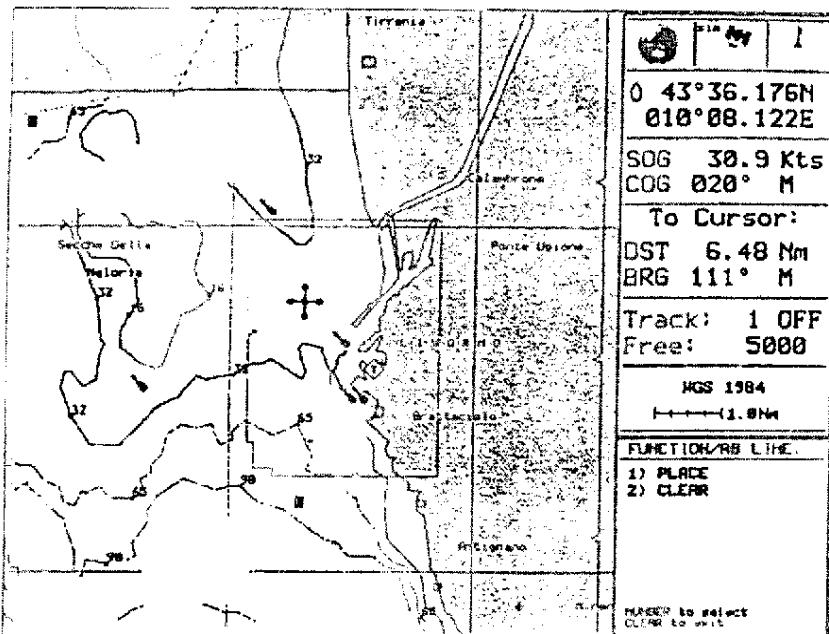


Fig. 4.1.1 - A-B Function

A-B Placing

Place the cursor in the desired place and then press the 'PAGE/1' key: the "A" point is positioned on the cursor position.

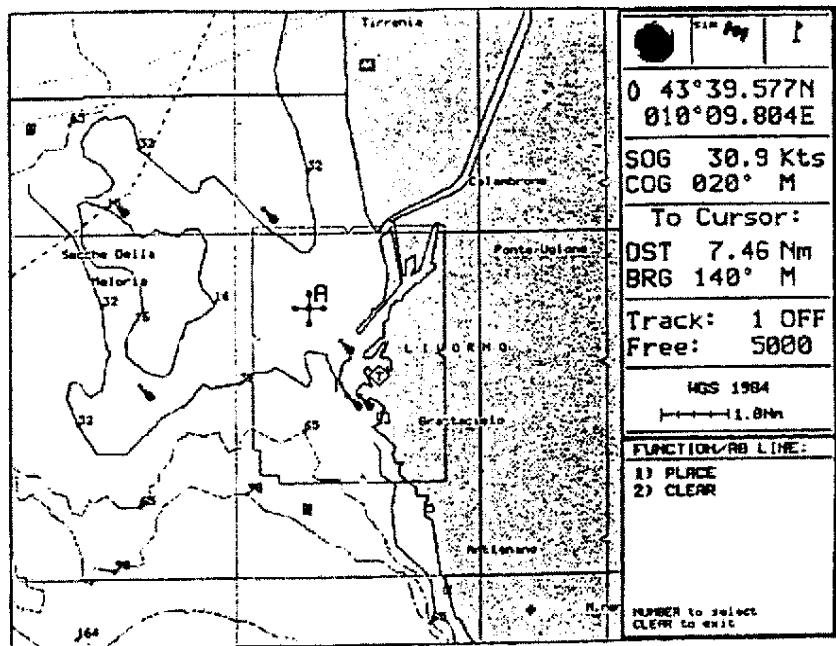


Fig. 4.1.1a - "A" point setting

Move the cursor in the desired place and then press the 'PAGE/1' key again to place the "B" point:

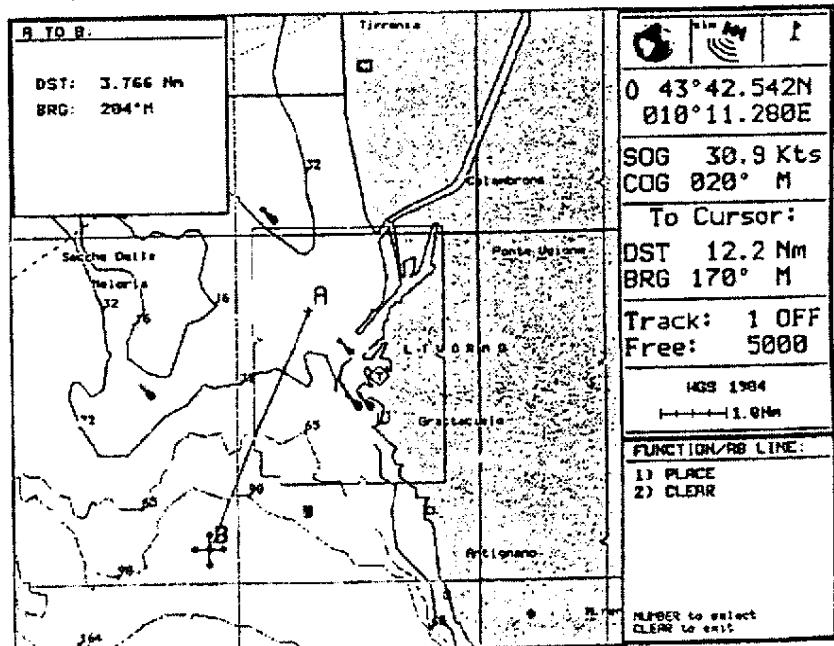


Fig. 4.1.1b - "B" point setting

A straight line connects the two points: a cross identifies the beginning and the end of the "A-B" line. A window appears with the distance (DST) and bearing (BRG) values.

Delete A-B Function

To delete the "A" and "B" points and the line press the '2' key.

4.1.2 EBL Function

With the 'DATA/3' Pad Menu opened, by pressing the '2' key you can select the EBL option, "Electronic Bearing Line". The EBL is a dot line: the origin of the line is the ship's position if the system is in Navigation mode or the cursor position if in Charting mode. If the Text Area on the right side of the screen is shown, you can read the bearing value. Entering Navigation mode, the EBL is placed on the ship position and it follows the ship.

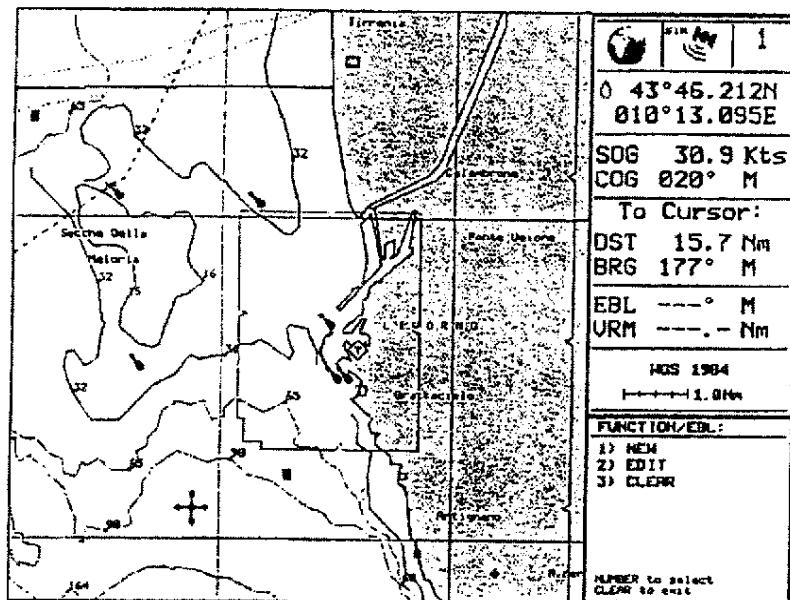


Fig. 4.1.2 - EBL function

EBL Placing

Pressing the 'PAGE/1' key to create EBL: on the screen a dot line appears:

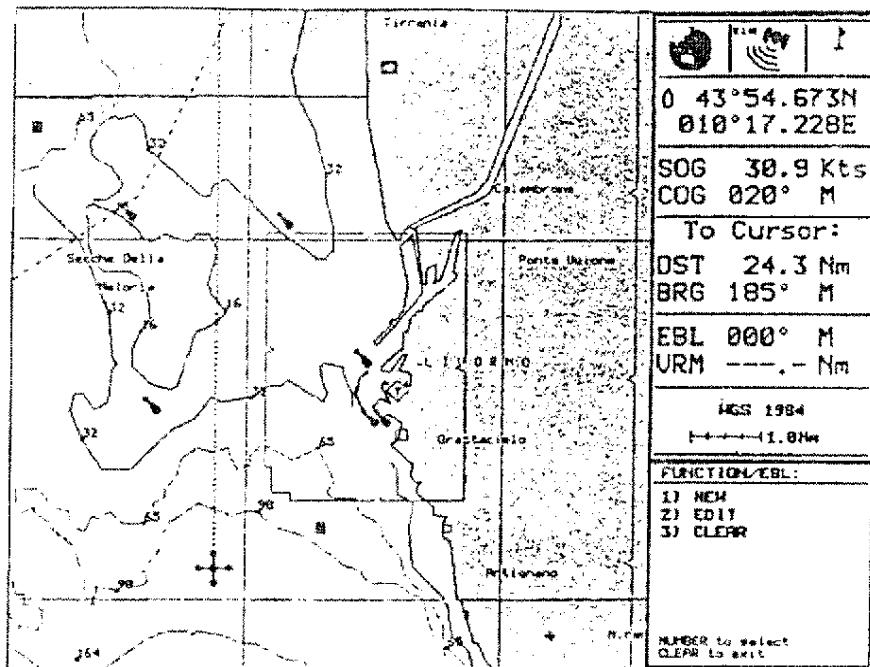
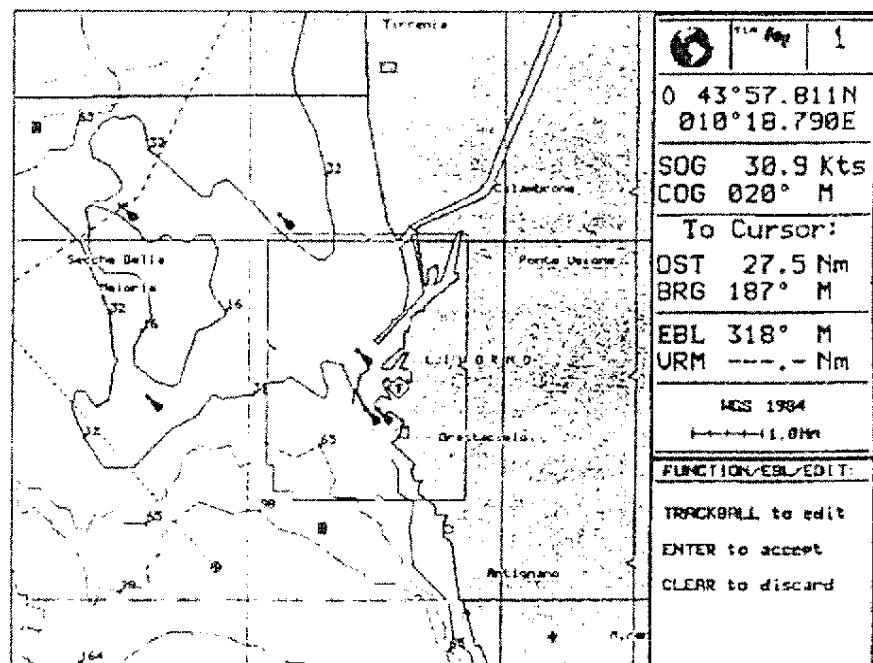


Fig. 4.1.2a - EBL setting (I)

EBL Setting

After pressing the '2' key, you can move the dot line in any direction you choose rotating up and down the trackball:



Press the 'ENTER' key to confirm or the 'CLEAR' key to abort.

EBL Deleting

To delete EBL press the 'DATA/3' key: the dot line disappears from the screen.

4.1.3 VRM Function

With the 'DATA/3' Pad Menu opened, by pressing the 'DATA/3' key you can select the VRM option, "Variable Range Marker". The VRM is a circle and its radius is determined by the user. The circle's center is the ship's position if the system is in Navigation mode or the cursor position if in Charting mode. If the Text Area on the right side of the screen is shown, you can read the value of the radius. Entering Navigation mode, the VRM is placed on the ship position and it follows the ship.

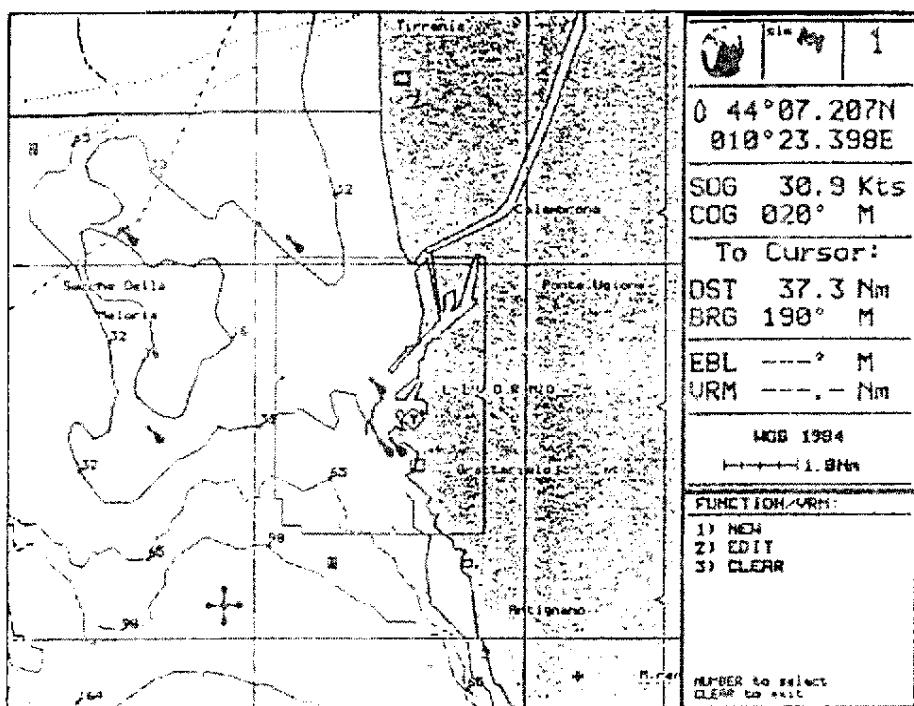


Fig. 4.1.3 - VRM function

VRM Placing

By pressing the 'PAGE/1' key to create VRM: on the screen a circle appears:

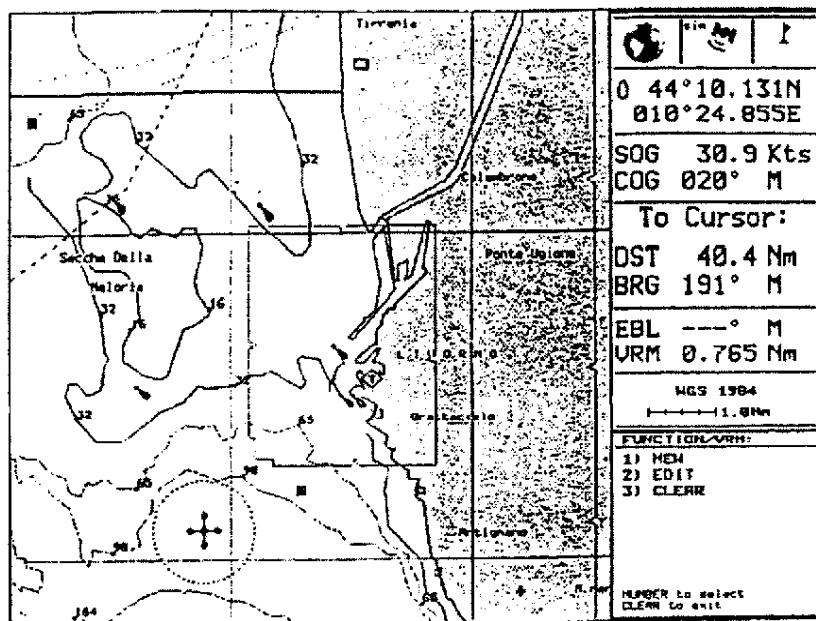


Fig. 4.1.3a - VRM setting (I)

VRM Setting

After pressing the 'I2' key, you can modify the radius of the circle rotating up and down the trackball:

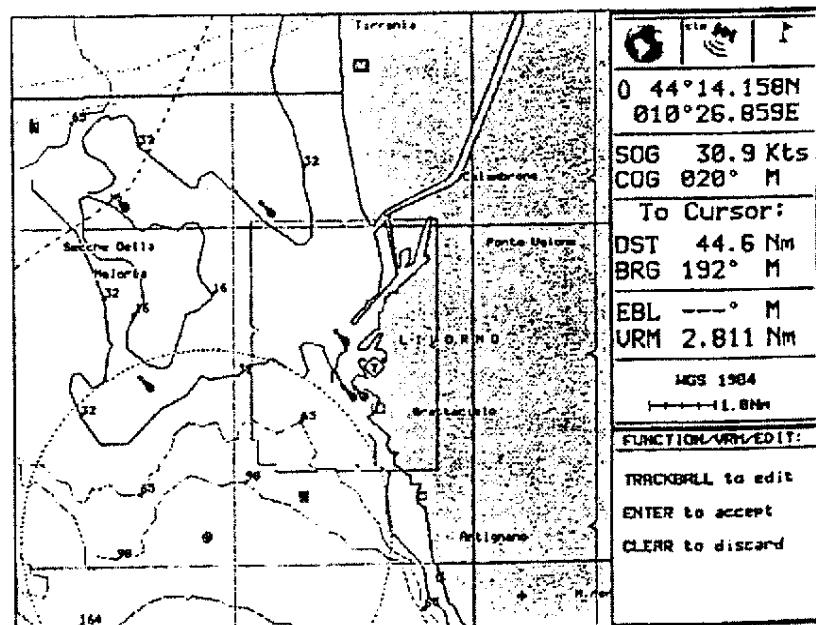


Fig. 4.1.3b - VRM setting (II)

Press the 'ENTER' key to confirm or the 'CLEAR' key to abort.

VRM Deleting

To delete VRM press the 'DATA/3' key: the circle disappears from the screen.

4.1.4 TIMER Function

With the 'DATA/3' Pad Menu opened, by pressing the '4' key you can select the TIMER option. If the Text Area is shown in the right side of the screen, you can read the timer and time value.

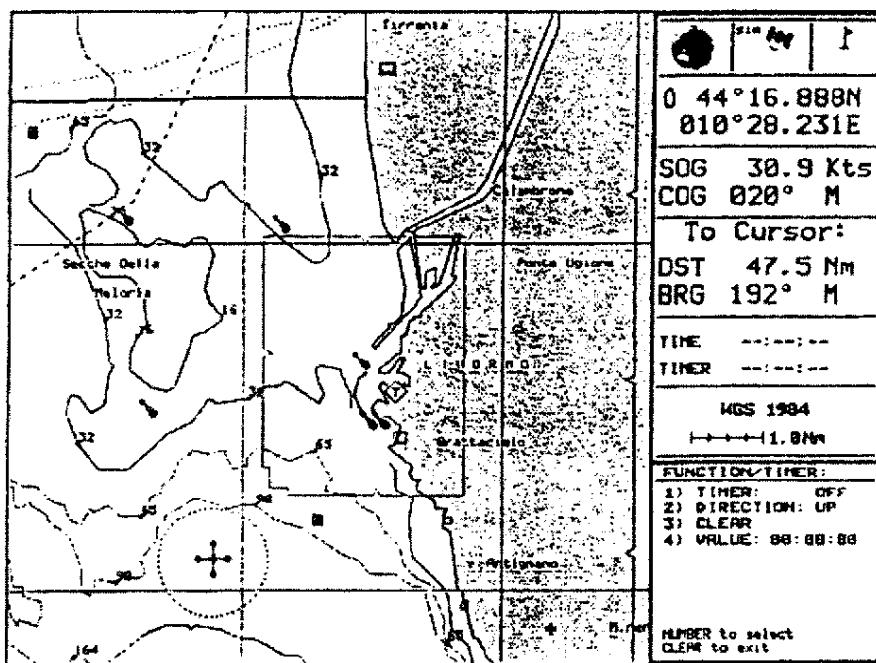


Fig. 4.1.4 - Timer function

TIMER ON/OFF

Press the 'PAGE/1' key to switch ON or OFF the Timer function.

TIMER Direction

Press the '12' key to set the direction, UP or DOWN.

TIMER Clear

Press the 'DATA/3' key to clear the Timer.

TIMER Value

Press the '4' key to set the Timer function. Use the numeric keys to insert the desired value in the selected field, moving the cursor with the trackball. Press the 'ENTER' key when finished.

4.2 The 'MARK' key: Marks handling

The 'MARK/3' key allows you to activate a Pad Menu with 6 items:

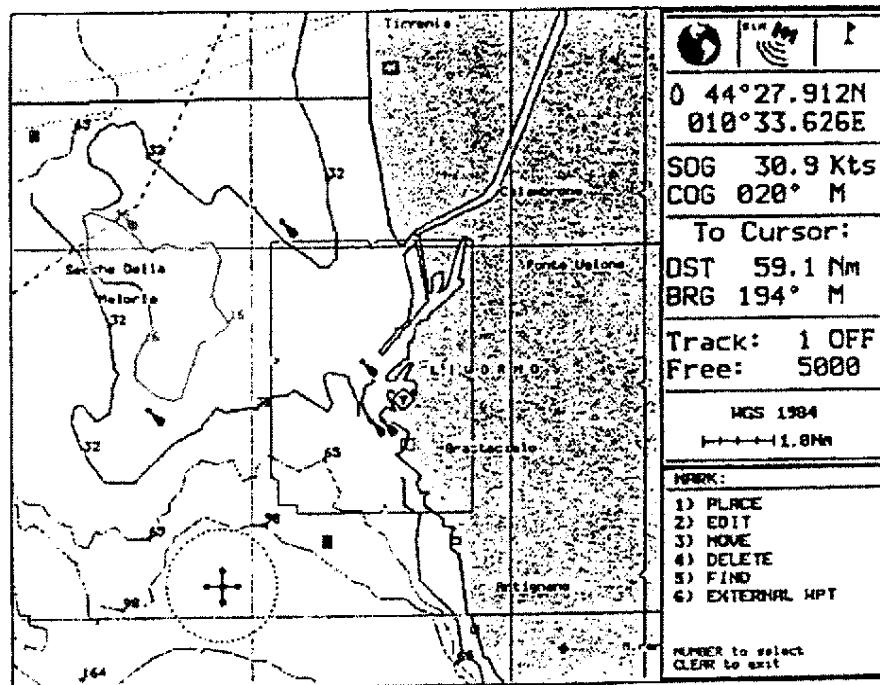


Fig. 4.2 - 'MARK' Pad Menu

4.2.1 PLACE MARK Function

By pressing the 'PAGE/1' key it is possible to place a reference point, called Mark, related to the cursor position:

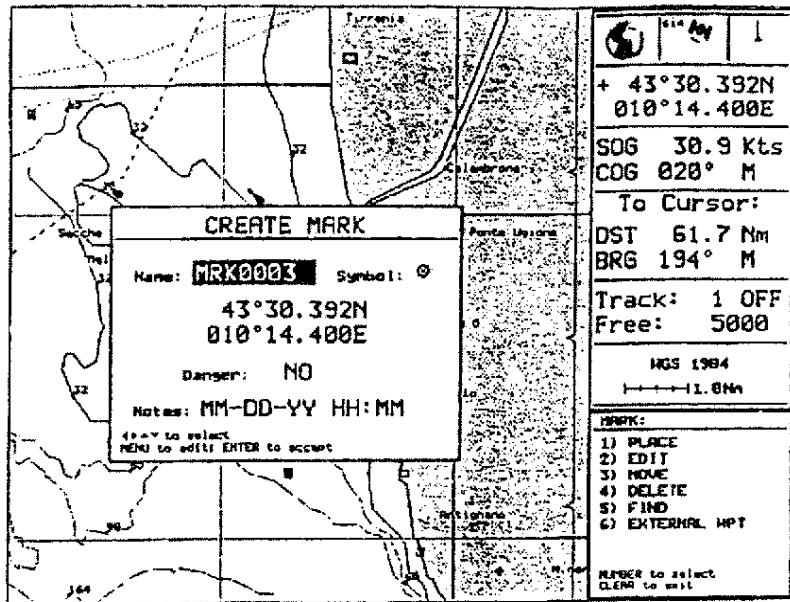


Fig. 4.2.1 - Mark placing

On the screen a window is opened, the "Name" field appears in reverse video. Press the 'MENU' key to edit the label: move the selected character rotating the trackball to left/right and insert the desired letter or digit rotating the trackball up/down (the label may have 8 characters to max). Then press the 'ENTER' key to confirm the name of Mark.

Use the trackball to select the "Symbol" field, that appears in reverse video. Press 'MENU' to edit: a second window is opened with the 16 available symbols to represent the Mark. Move the trackball to select the desired symbol, then press 'ENTER' to confirm. The window with the 16 symbols disappears and the selected symbol is shown near the "Symbol".

Use the trackball to select the coordinates field, that appears in reverse video. Press 'MENU' to edit: use the trackball again to move the cursor to the left/right and to insert the desired value. Press 'ENTER' to confirm.

Then use the trackball to select the "Danger" field and press 'MENU' to edit: move the trackball up/down to choose YES or NO, then press 'ENTER' to accept.

Finally select the "Notes" field, to edit the field. Use the trackball to insert the desired values and then press 'ENTER' to accept. As default it contains the data and time of Mark creation.

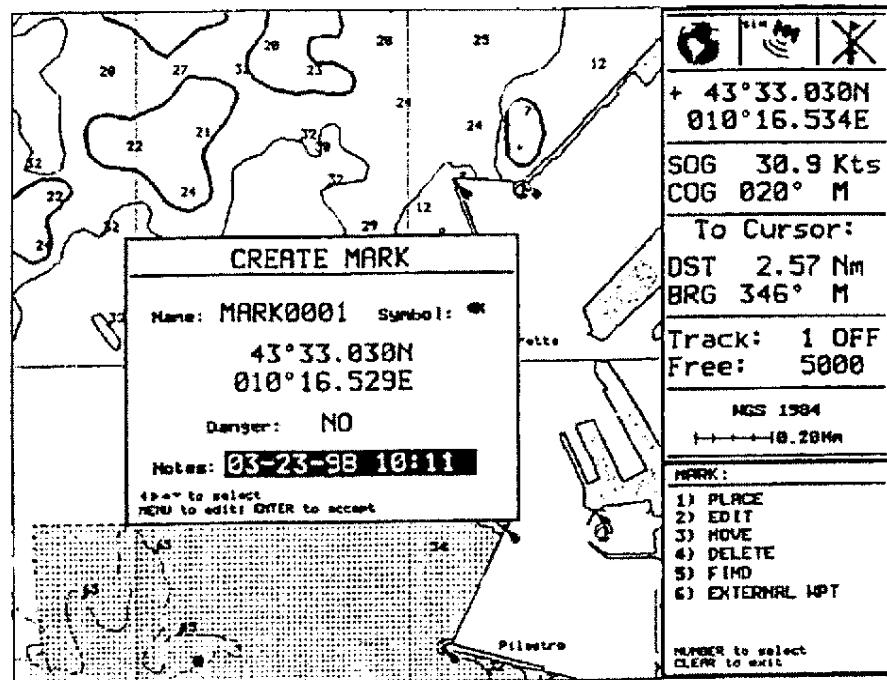


Fig. 4.2.1a - Mark setting

After pressing 'ENTER', this window disappears and the Mark is shown on the screen in the desired position:

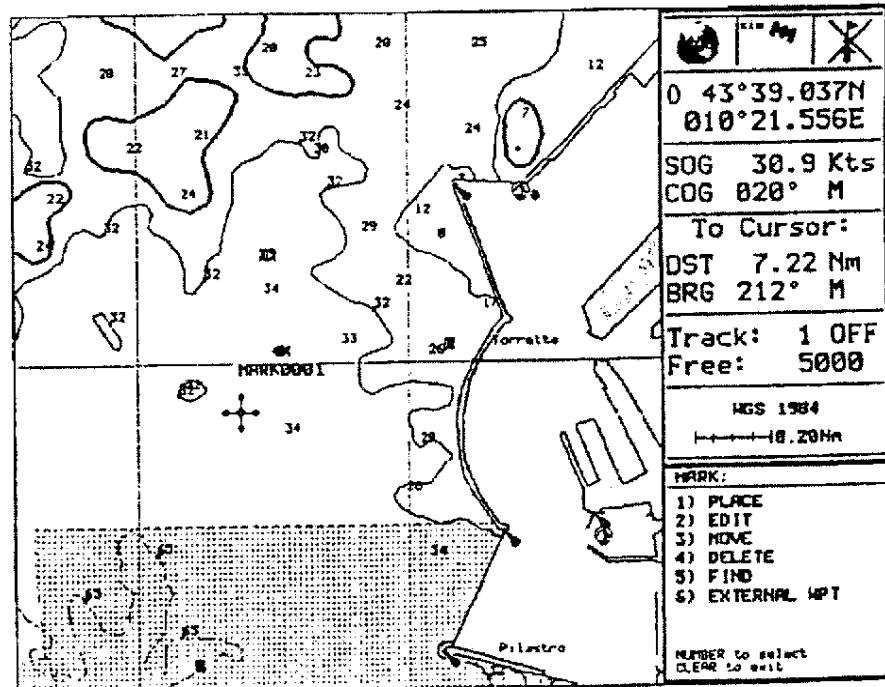


Fig. 4.2.1b - Mark

When the cursor is placed on the Mark, an info window is opened

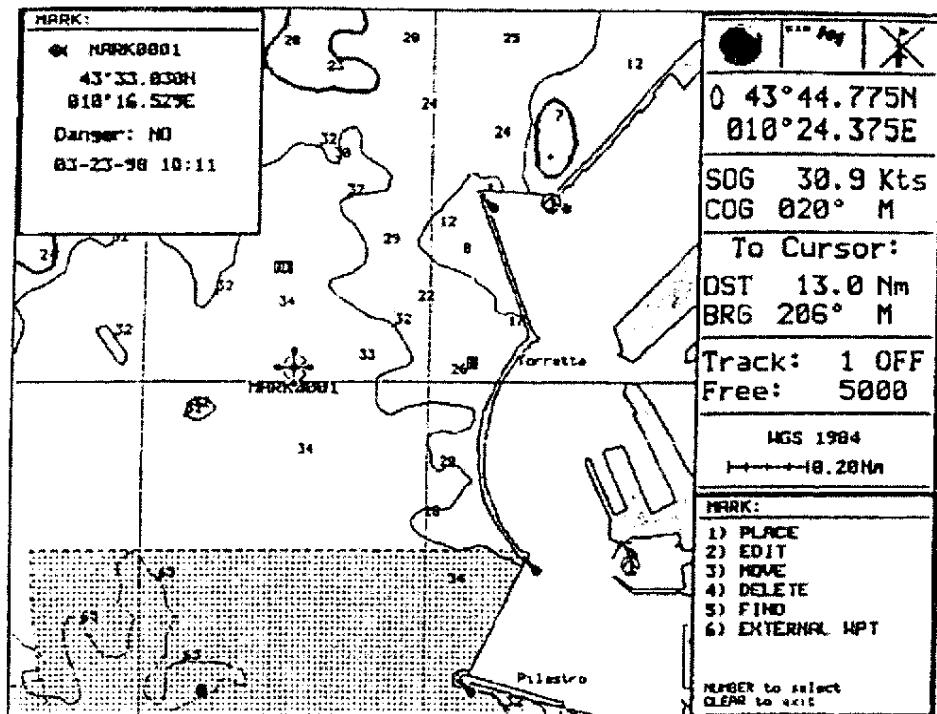


Fig. 4.2.1c - Mark with information window

4.2.2 EDIT MARK Function

By pressing the '2' key when the cursor is on an existing Mark, on the screen an information window on the existing Mark appears:

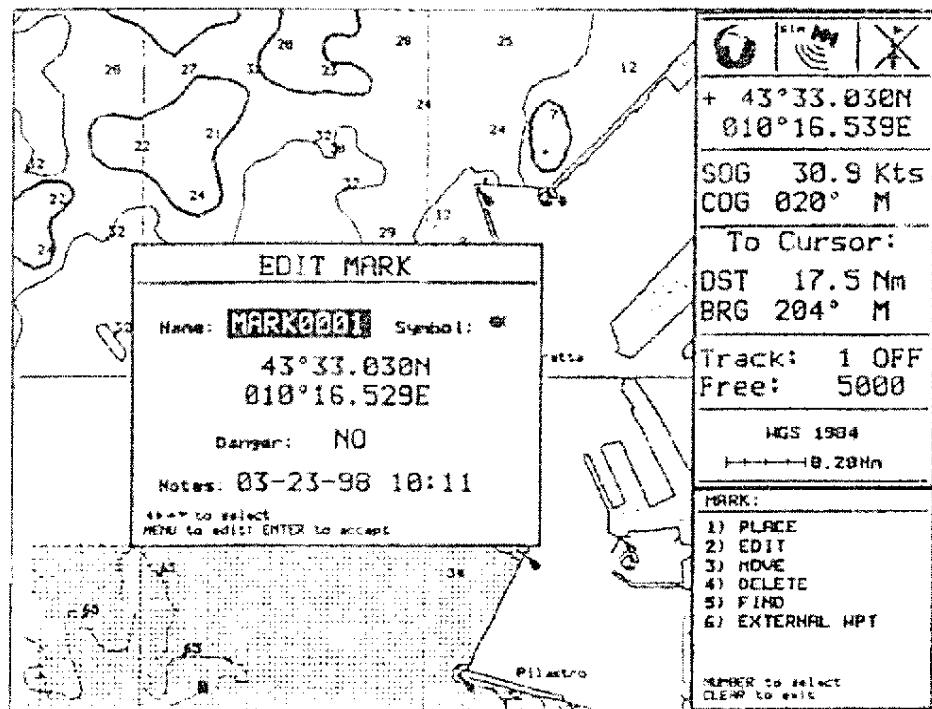


Fig. 4.2.2 - Edit Mark

It is possible to modify the label, symbol and coordinates of the existing Mark. See the previous par. 4.2.1.

4.2.3 MOVE MARK Function

The chart plotter allows you to move on the screen already existed Marks to place them in new positions.

Place the cursor on the existed Mark and then press the 'DATA/3' key:

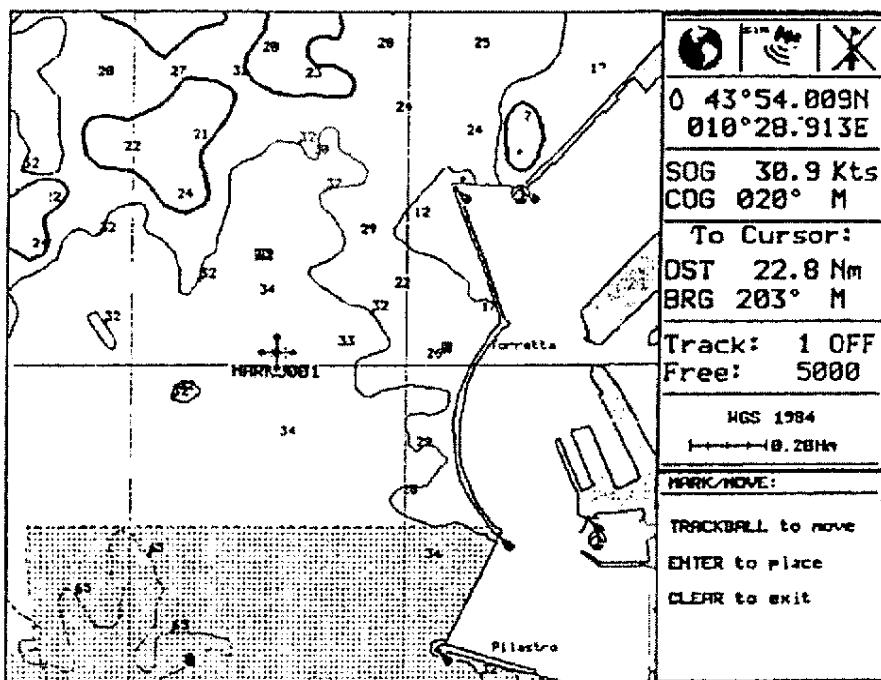


Fig. 4.2.3 - Move Mark function (I)

Now it is possible to move Mark on the screen, with its identifier, to place it on the new position. By moving the cursor with the trackball, on the screen a dot line that connects the Mark with the new position is shown on the screen:

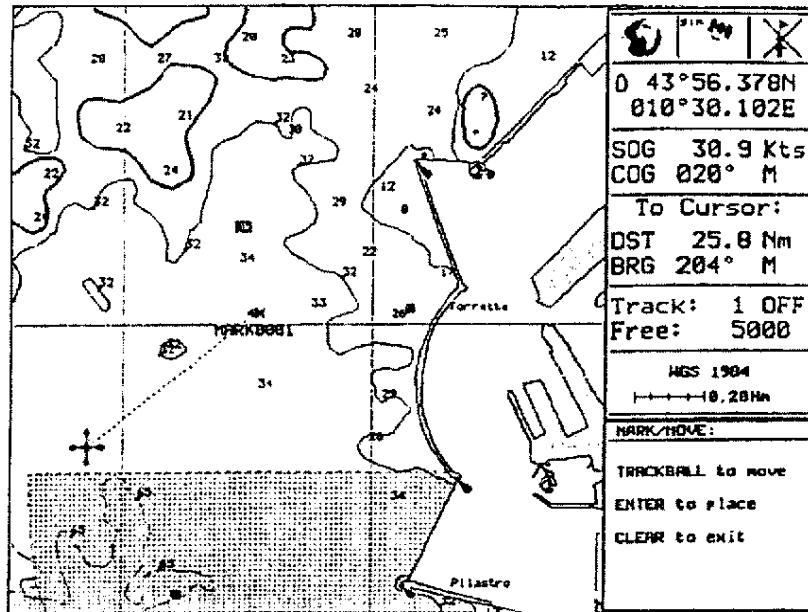


Fig. 4.2.3a - Move Mark function (II)

Press 'ENTER' to confirm the new position:

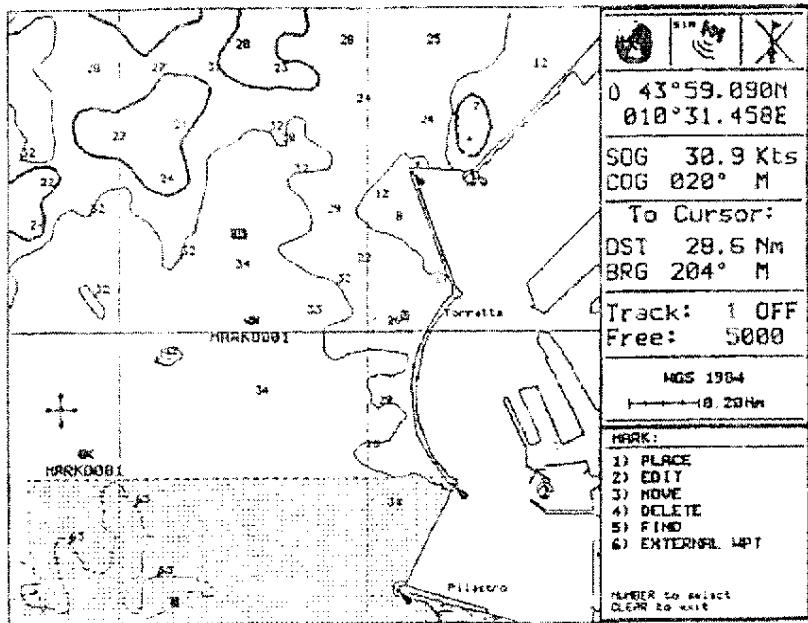


Fig. 4.2.3b - Move Mark function (III)

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

4.2.4 DELETING MARK Function

You can delete a Mark indicated by the cursor:

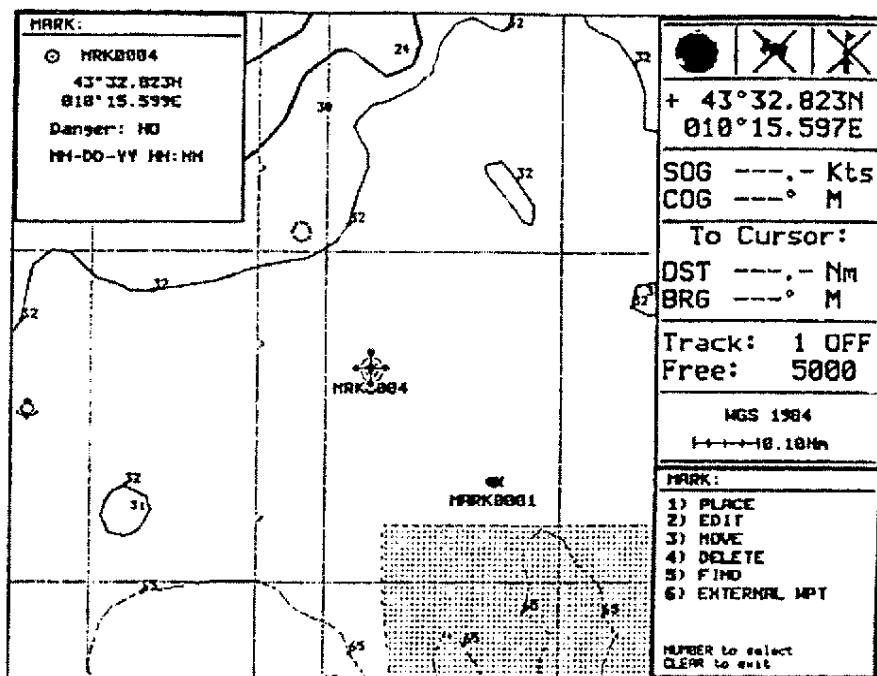


Fig. 4.2.4 - Deleting Mark function (I)

Press the '4' key: on the screen a window appears, select YES to delete the Mark identified by the cursor (NO otherwise):

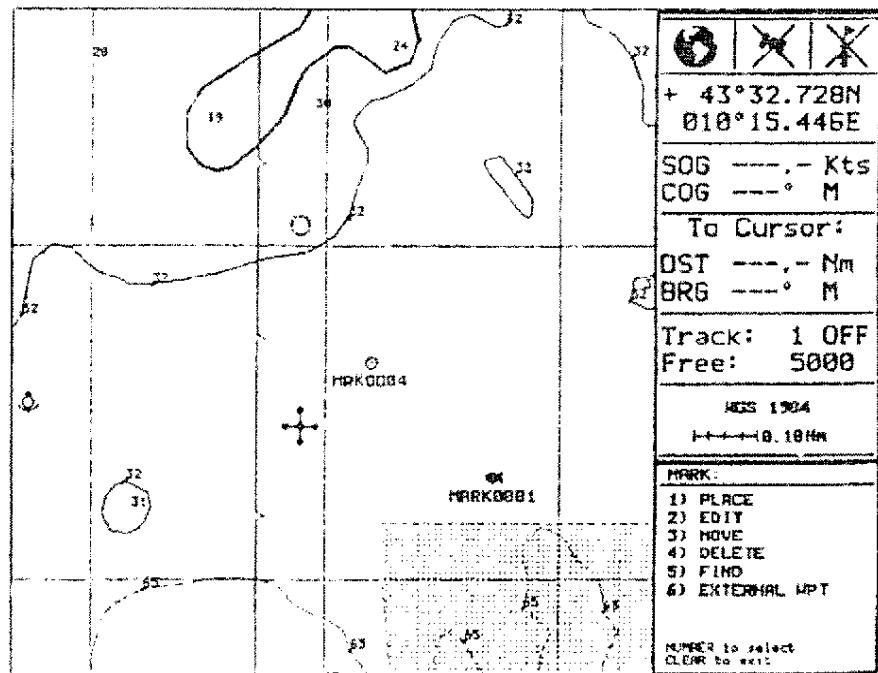


Fig. 4.2.4a - Deleting Mark function (II)

4.2.5 FIND MARK Function

The deleting Mark remains on the screen shaded until the next screen redraws.

4.2.5 FIND MARK Function

You can find a Mark on the screen given its coordinates, symbol and label. After pressing the 'HOME/5' key, on the screen a window is opened. Use the trackball up/down to edit the letter under the prompt and right/left to go to the next character to edit.

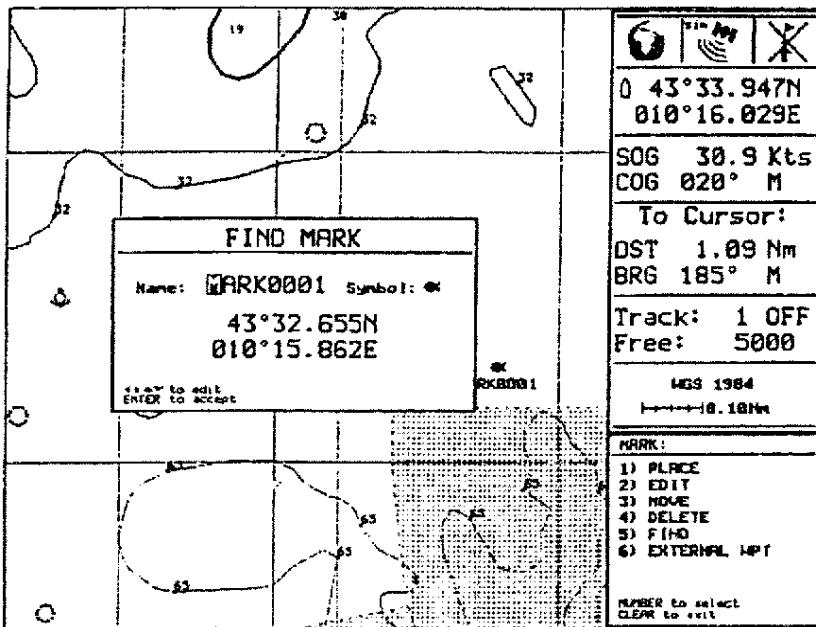


Fig. 4.2.5 - Find Mark function (I)

Press 'ENTER'. When the desired Mark is found, the cursor is placed on the Mark, and the info window is opened on the screen:

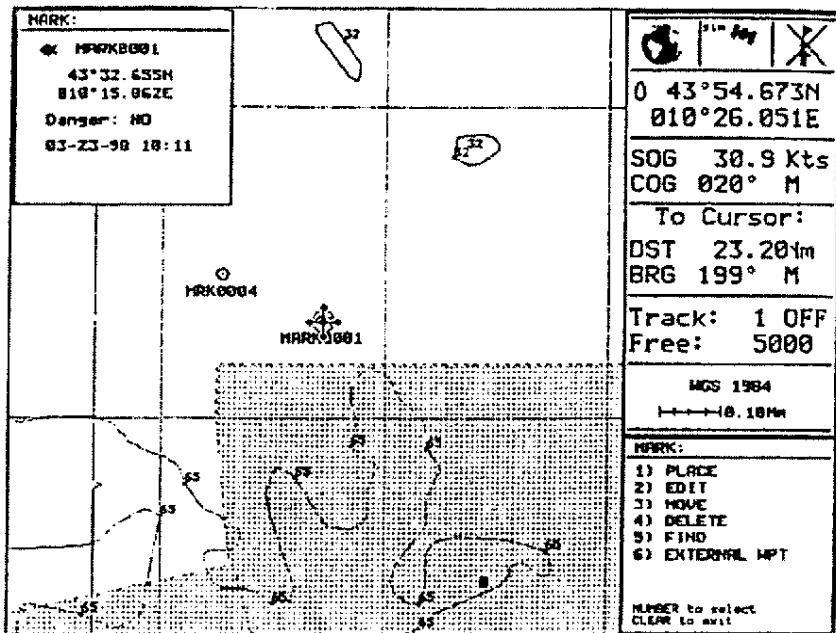


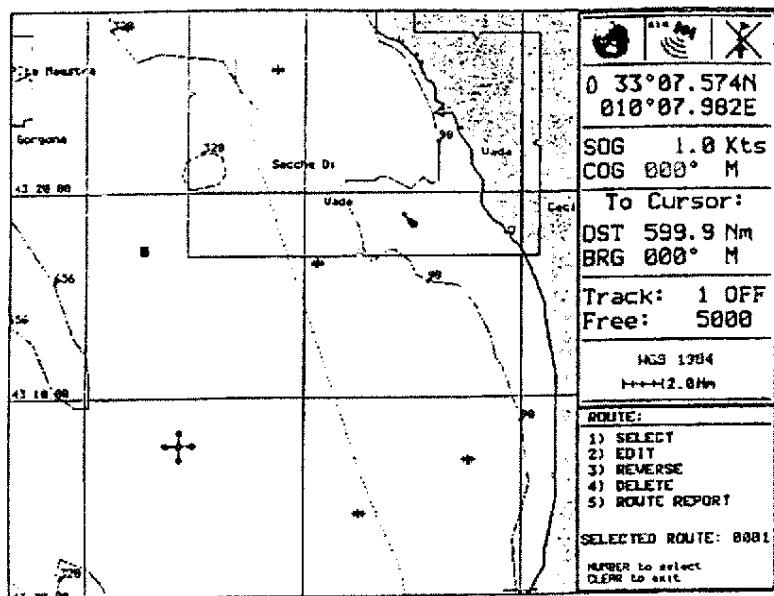
Fig. 4.2.5a - Find Mark function (II)

4.2.6 EXTERNAL WAYPOINT Function

By pressing the '6' key it is possible to set a Mark on the place of the Waypoint received from GPS or Loran (Waypoint External option). See also par. 5.4.

4.3 The 'ROUTE' key: routes handling

The 'ROUTE' key allows the route management.



Fig

4.3 SELECT ROUTE Function

By the 'PAGE/1' key it is possible to select the route to edit. After pressing this key:

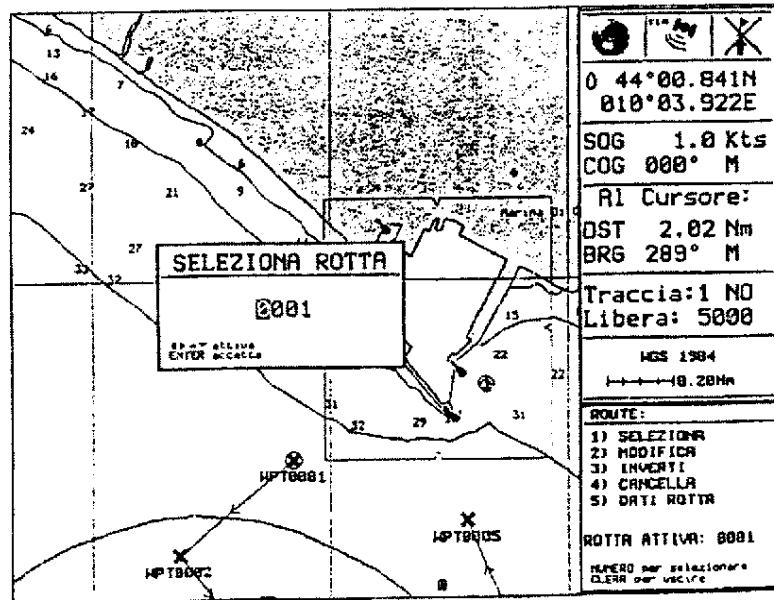


Fig. 4.3.1 - Select route function (I)

Rotate the trackball to the left/right to move the cursor to the left/right, rotate up/down to increase/decrease the selected character. When the desired route number has been inserted, press the 'ENTER' key to confirm. If the route selected already exists, the cursor is placed on the central Waypoint of the route.

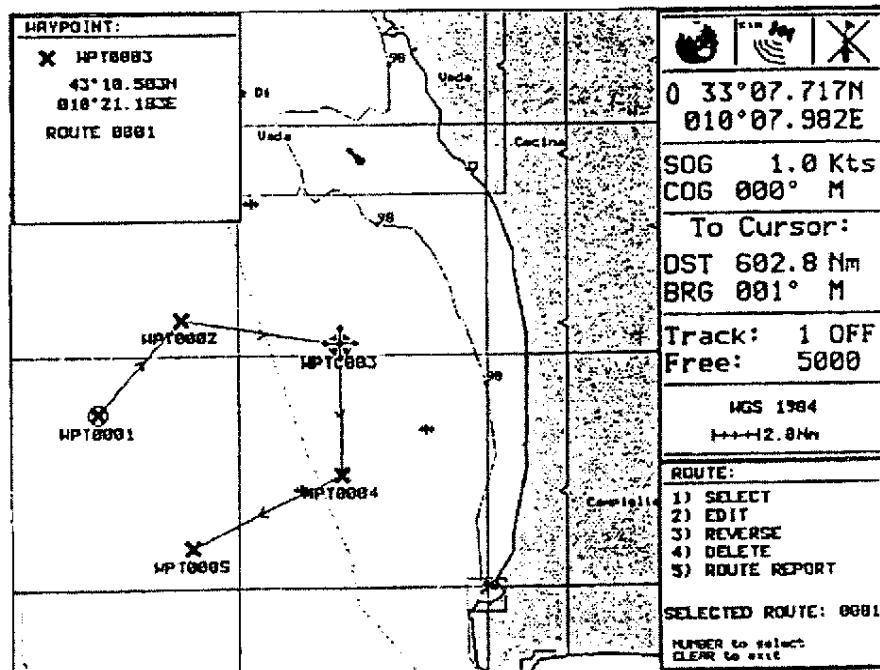


Fig. 4.3.1a - Select route function (II)

4.3.2 EDIT ROUTE Function

To modify the selected route or to create a new one, press the '2' key. On the screen a new Pad Menu is opened:

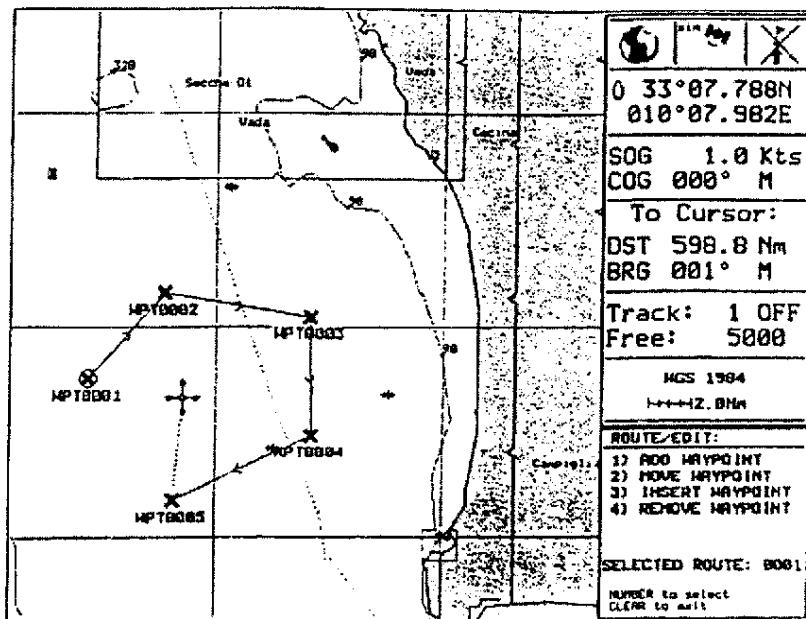


Fig. 4.3.2 - Route/Edit function

ADD WAYPOINT Function

Press the 'PAGE/1' key to insert a Waypoint on the place identified by the cursor (if the route exists, the Waypoint is place at the end of the route):

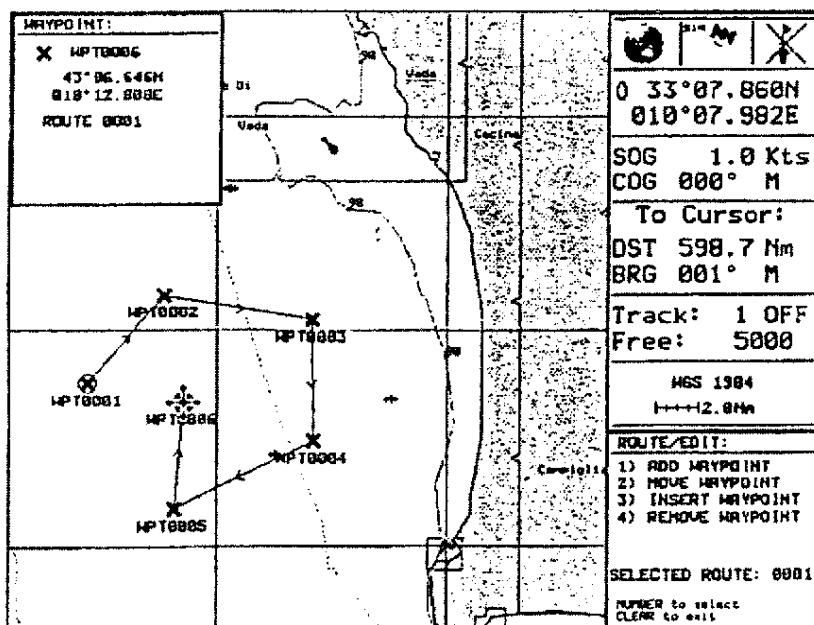


Fig. 4.3.2a - Placing Waypoint (I)

The sequence of moving the cursor and pressing the 'PAGE/1' key is continued to create the route. Segments connecting the new Waypoint and the last one in the route are shown, and a circled point indicates the Waypoint of starting route.

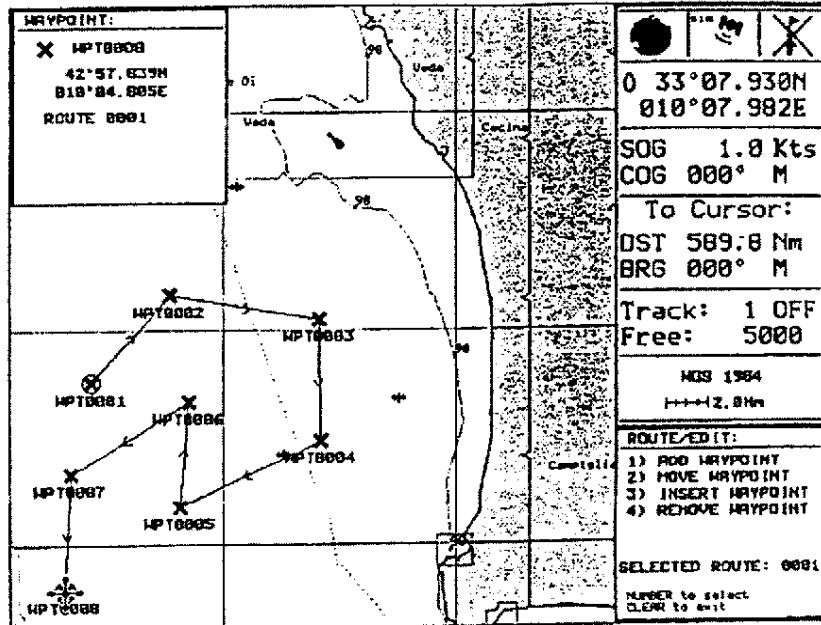


Fig. 4.3.2b - Route planning

ADD WAYPOINT on COORDINATES Function

You may also create Waypoints at specific points of Latitude and Longitude, selecting also the name. Press the 'PAGE/1' key for more than 1 second. On the screen an info window with the Waypoint name, symbol and coordinates is opened:

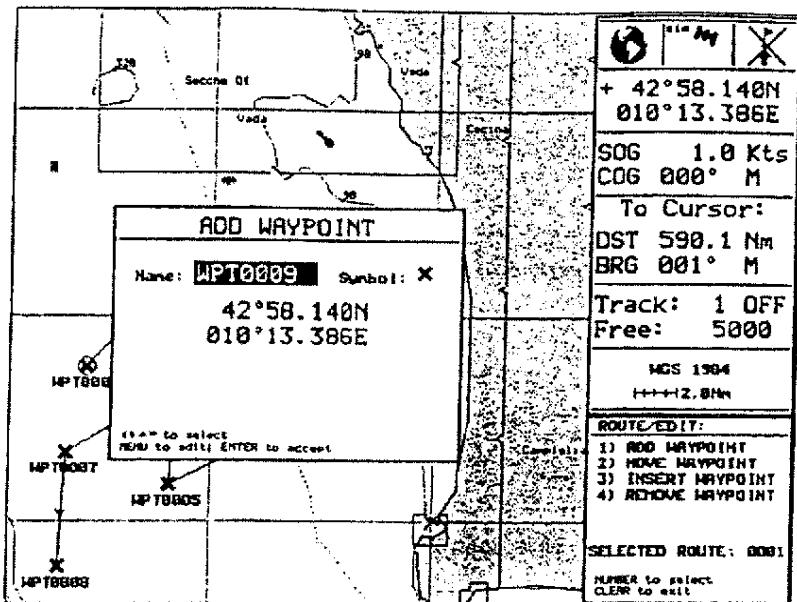


Fig. 4.3.2c - Placing Waypoint at Lat/Lon coordinates

It is possible to insert the desired name and coordinates. Press the 'MENU' key to edit the Name field when it is selected (shown in reverse video screen): rotate the trackball up/down to insert the desired character, rotate it left/right to move the cursor. Press 'ENTER' to confirm the name (the name may have 8 characters to max). Select the coordinate field and press 'MENU' to edit it: insert the desired coordinates value with the trackball and then press 'ENTER' to confirm. The window disappears and the Waypoint inserted is centered on the screen.

MOVE WAYPOINT Function

The chart plotter allows you to move on the screen already existed Waypoints to place them in new positions. To move Waypoint place the cursor on existed Waypoint and then press the '2' key:

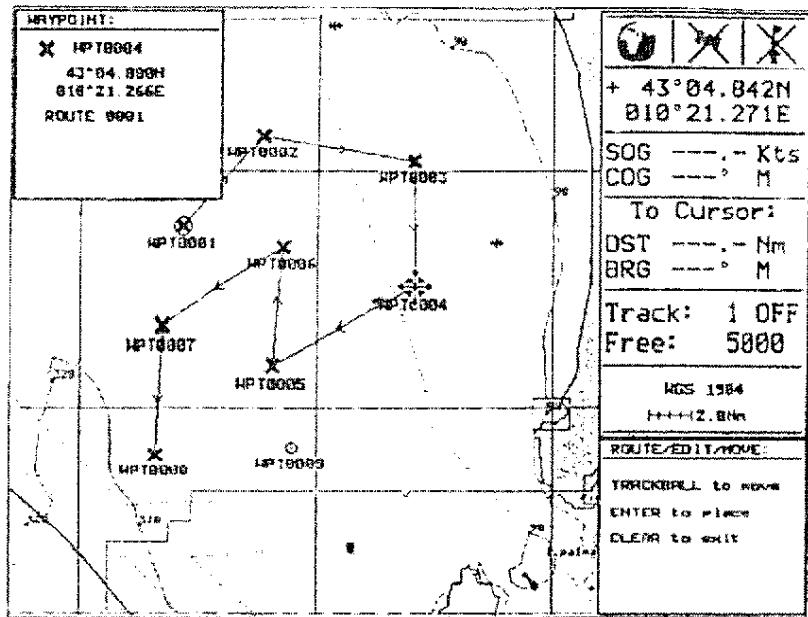


Fig. 4.3.2d - Moving Waypoint function (I)

It is possible to move a Waypoint on the screen and place it on the desired position. Moving the cursor by the trackball, on the screen a dot line that connects the Waypoint to the new position is shown:

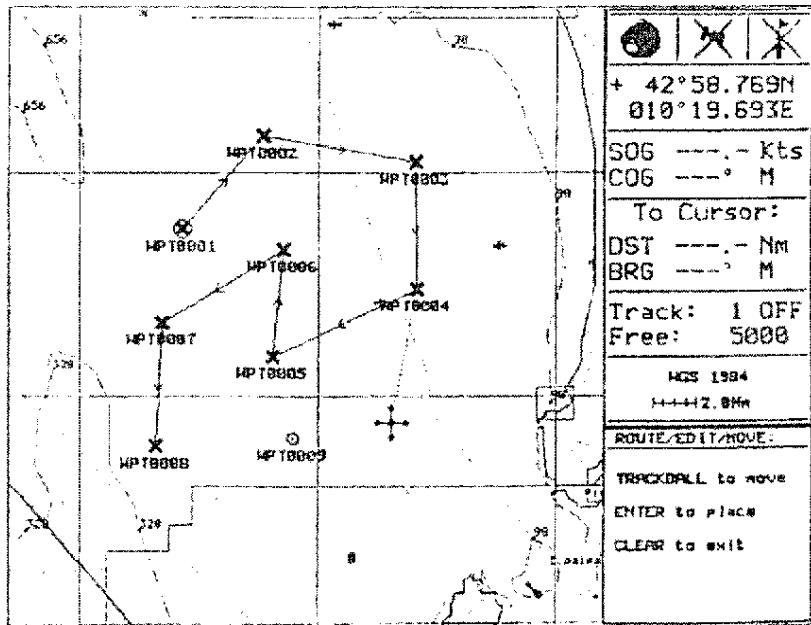


Fig. 4.3.2e - Moving Waypoint function (II)

Choose the new position and press 'ENTER' key. On the screen the Waypoint is placed in the new position:

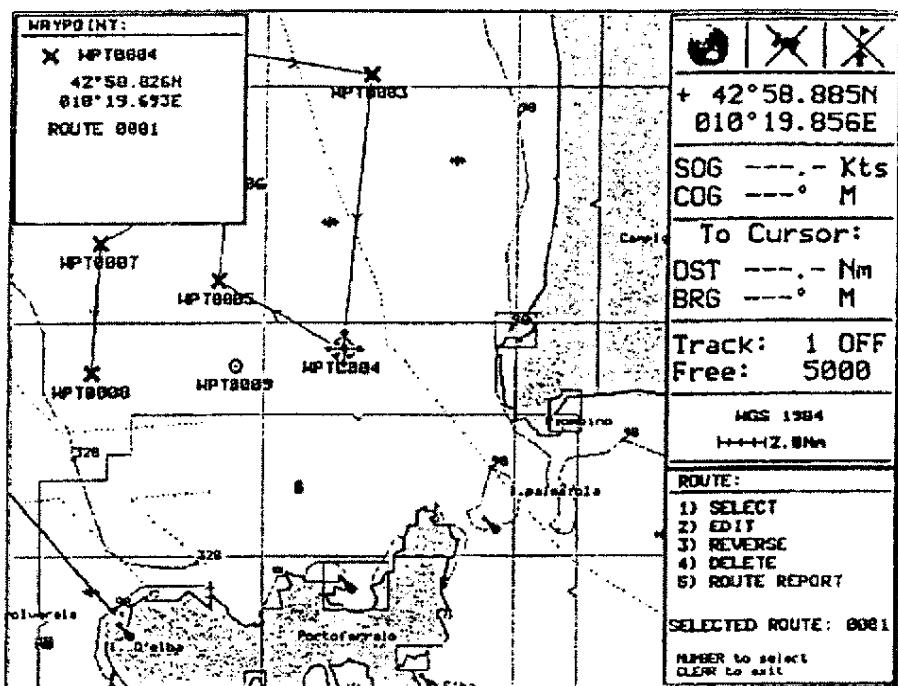


Fig. 4.3.2f - Moving Waypoint function (III)

INSERTING WAYPOINT Function

It is possible to insert a Waypoint between two existing Waypoint of a route by placing the cursor on the route segment and then press the 'DATA/3' key:

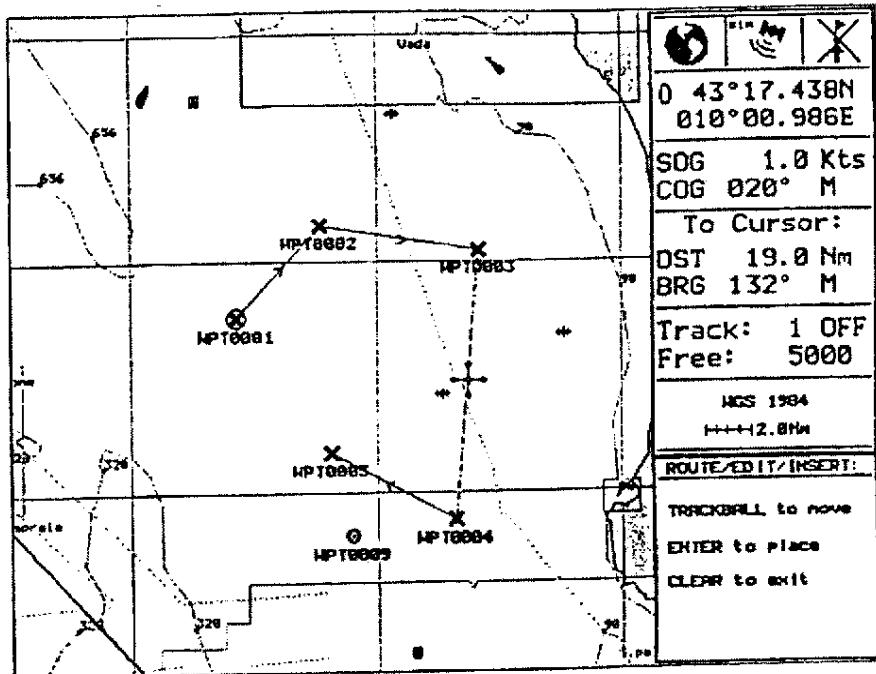


Fig. 4.3.2g - Placing Waypoint between two existing ones (I)

The line between the two Waypoints became dotted, then move the cursor to the new position. When the cursor is stationary for a second, the line will "rubber-band", drawing a dot line between previous and next Waypoint:

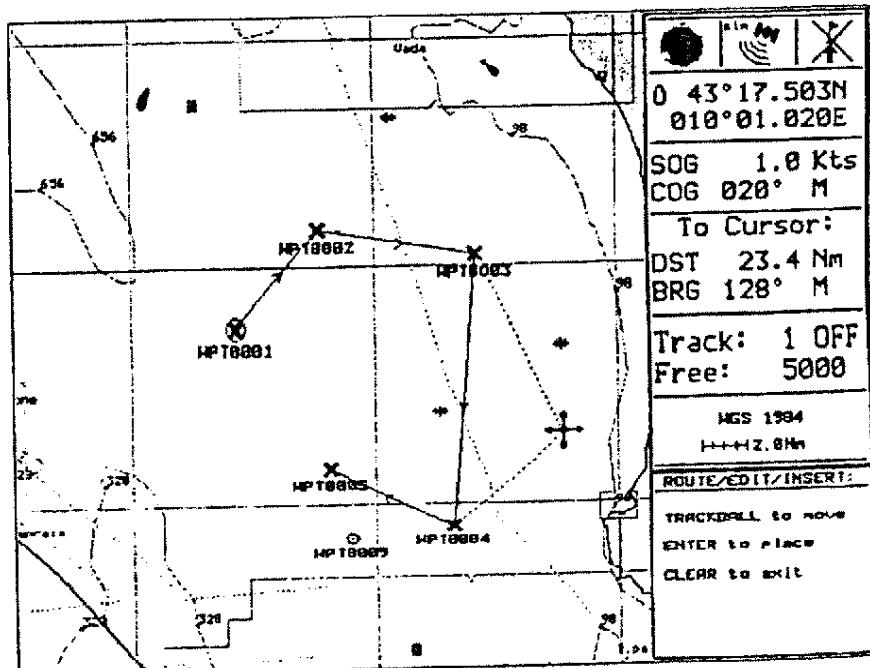


Fig. 4.3.2h - Placing Waypoint between two existing ones (II)

Once you have positioned the cursor at the new location press the 'ENTER' key (the 'CLEAR' key abort operation):

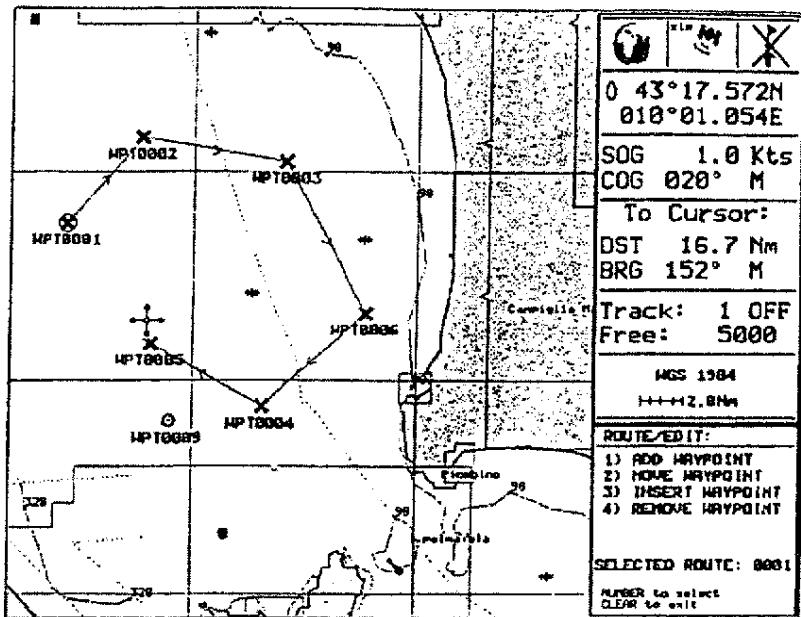


Fig. 4.3.2i - Placing Waypoint between two existing ones (III)

DELETE WAYPOINT Function

You can delete a Waypoint from the working route, that is indicated by the cursor. To delete the Waypoint, place the cursor on it: