

NAV-STATION

Chart Plotter Name	Description	SOFTWARE
NAV-STATION 5 FLUSH	5" Sunlight Readeable Color Display External Smart GPS Receiver	S3egCW5vc
NAV-STATION 5	5" Sunlight Readeable Color Display Internal GPS Receiver	S3igCW5vc
NAV-STATION 6 FLUSH	6" Gray Levels Display External Smart GPS Receiver	S3egCW6m
NAV-STATION 6	6" Gray Levels Display Internal GPS Receiver	S3igCW6m
NAV-STATION 6 SUNCOLOR FLUSH	6" Sunlight Readeable Color Display External Smart GPS Receiver	S3egCW6c
NAV-STATION 6 SUNCOLOR	6" Sunlight Readeable Color Display Internal GPS Receiver	S3igCW6c
NAV-STATION 11 COLOR	11" Color Display External Smart GPS Receiver	S3egCW11c
NAV-STATION 11 SUNCOLOR	11" Sunlight Readeable Color Display External Smart GPS Receiver	S3egCW11c
NAV-STATION 11 SUNCOLOR VCAM	11" Sunlight Readeable Color Display External Smart GPS Receiver & Video Input	S3egCW11c
NAV-STATION PANORAMA	11" Sunlight Readeable Color Display External Smart GPS Receiver & Video Input	S5egNS11c



User Manual

code: (d1107-150207e)

WARNING

Electronic charts displayed by the chart plotter are believed to be accurate and reliable, but they are not intended to replace 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.

WARRANTY STATEMENT

Interphase Technologies, Inc. warrants this unit to be free from defects in material and workmanship. During the warranty period, Interphase Technologies, Inc. will repair or replace any component which fails in normal use without charges for parts or labor. To receive warranty service, the unit must be returned to a Interphase Technologies, Inc. Authorized Warranty Service Centre, freight charges prepaid along with a copy of the original retail purchase receipt. This warranty is in lieu of all other warranties either expressed or implied.

This warranty does not apply to an Interphase product that has failed due to improper installation, misuse, or accident, nor does it apply to products which have been repaired or altered outside the Interphase factory.

Any costs incurred with transducer replacement are specifically excluded from this warranty other than the cost of the transducer itself.

THIS IS THE ONLY WARRANTY. INTERPHASE TECHNOLOGIES, INC. EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES INCLUDING WARRANTIES OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL INTERPHASE TECHNOLOGIES, INC. NAVIGATION SYSTEMS LTD. BE LIABLE FOR CONSEQUENTIAL DAMAGES OR LOSS OF USE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS WHICH MAY VARY FROM STATE TO STATE.

CLEANING PROCEDURE FOR THE PLOTTER SCREEN

Cleaning your chart plotter screen is a very important operation and must be done carefully. Since the surface is covered by an antireflective coating, the procedure for cleaning all the surfaces can be performed in the following way. You use 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.

L'uso dei nostri prodotti implica, da parte dell'utente, la conoscenza e l'accettazione di tutte queste avvertenze.

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1. Introduction

If you have not used a position-finding instrument before and intend to use your chart plotter 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 chart plotter. 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 chart plotter.

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 capital letters enclosed in square brackets, for example 'ACCEPT'.

Menu operations are in bold characters listed by keys sequence with the menu names enclosed between inverted commas, for example '**ENTER**' + "**MARK**" + '**ENTER**' + '**MOVE**' + '**ACCEPT**' means: press the 'ENTER' key, using the cursor key select the Mark option and press 'ENTER' to place Mark, press the software key '**MOVE**' to change the Mark position and press the software key '**ACCEPT**' to confirm the new position.

Terms underlined, for example Mark, are explained in the Chapter 6.

Into all information windows items are displayed in gray color when there are not active (it is not possible to select them and place on the cursor).

Any menu operation and function activation in this User Manual is related to all chart plotter models (see the previous table). Whenever it is necessary, a note has been inserted for the other models.

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, the chart plotter 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 C-CARD**.

1.2 BASICS

The chart plotter is controlled by a keyboard: there are labelled keys and software keys (soft keys). The labelled keys are dedicated to specific functions, the

soft keys have different functions according to the modes of operation: their labels for the current functions, located on the front panel, are shown on the screen right above the keys. There is also a cursor key to move a cursor across the screen. 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.

1.3 IF YOU NEED ASSISTANCE

If your chart plotter does not operate properly, please refer to System Test. Most common operating difficulties can be diagnosed using these tests. If you still need assistance, call your local dealer, reporting the information available in the System Information page, selected following the procedure:

➤ Press any soft key + 'SETTING' + "About..." + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "About..." + 'ENTER'

1.4 UPDATE WORLDWIDE CARTOGRAPHY

It is possible to select the Software Update menu from the Information page following the procedure:

➤ Press any soft key + 'SETTING' + "About..." + 'ENTER' + Insert the special C-CARD WWB UPLOAD + 'PAGE' + "Update Worldwide Cartography" + 'ENTER' + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "About..." + 'ENTER' + Insert the special C-CARD WWB UPLOAD + 'PAGE' + "Update Worldwide Cartography" + 'ENTER' + 'ENTER'

2. Before You Begin

This chapter provides basic information to get you start 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.

2.1 THE KEYBOARD

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 cursor key

Moves the cursor about on the display screen, quickly and accurately. It also scrolls the desired option in the menu page(s): up/down move the current menu selection; right executes the function assigned to the active selection in the menu (same as 'ENTER'). Up/down in the number/character input procedure changes the value, left/right move the cursor on the previous/next position.

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

The 'ENTER' key

Selects the desired option, confirms selection, creates Objects (Mark, Way-point, MOB) and finds Information on Objects.

NAV-STATION 11 VCAM:

From any page pressing 'ENTER' for 2 seconds it is possible to activate the display of the Video Input 1.

The 'CLEAR' key

Excluding specific situations, returns to the previous menu or leaves a menu without making changes. If you are not into a menu, if the GPS computing a valid fix position and the chart plotter is not in Home mode, pressing 'CLEAR' sets Home mode. When Home (called also Navigate) mode is set, the cursor is not shown anymore and all cartographic functions (zoom, scroll, etc.) are leaded by the fix position. The fix is centered in the map display and the map scrolls underneath as the fix position changes. To deactivate Home mode move the cursor.

NAV-STATION 11 VCAM:

From any page pressing 'CLEAR' for 2 seconds it is possible to activate the display of the Video Input 2.

The 'PAGE' key

Press 'PAGE' to select the configuration. After pressing 'PAGE', the Page selection menu (with current page selected) is shown on the screen. For example, if the charting is on the screen, in the Page selection menu the selected item is Chart.

Moving cursor up/down selects the previous/next item. After the desired item has been selected, pressing 'ENTER' or moving cursor to right the Page selection menu has been closed and the current selection is shown as active page. Otherwise pressing 'CLEAR', the Page selection menu is closed with no changes. Also it is possible to select two pages at the same time (for example Chart and Depth Graph).

NAV-STATION 11 PANORAMA:

From the page selection menu it is possible to select Video 1 or Video 2, showing image from video camera 1 or video camera 2 at full screen.

Press and hold 'PAGE' for 1 second adjusts brightness and contrast (and handles the Palette ONLY FOR COLOR CHART PLOTTER).

The 'GO TO' key

Allows to select the main navigation functions to a Target. The 'GO TO' key is an *auto-diagnostic* type because the associated menu disables automatically the menu items that are not allowed in that moment. A menu item is disabled when the label is shown in light grey color, otherwise if the item label is shown in black color, the item is enabled. An item is automatically disabled when the associated function is not allowed.

The Goto menu that appears after the 'GO TO' key pressing shows the following 6 items: "LAST GOTO", "CURSOR", "MARK", "ROUTE", "PORT SERVICES", "CLEAR GOTO".

The "LAST GOTO" item when selected shows a window with the coordinates of the previous inserted Target.

The "CURSOR" item is disabled when in Navigation mode (for the Navigation (Home) mode meaning see the 'CLEAR' key in this paragraph); this item is enabled only if the cursor is moved to the desired position for inserting Target.

The "MARK" item is disabled if no Mark has been stored.

The "ROUTE" item is disabled if no Waypoint has been stored.

The "PORT SERVICES" item is disabled if no C-CARD with charting data has been inserted.

The "CLEAR GOTO" is enabled only if a Target has been inserted and all other items are disabled (because the Target is present yet).

Another characteristic of the 'GO TO' key is the following: to confirm selection it is possible to press 'ENTER' or 'GO TO'. So you can set many navigation functions without moving finger from the 'GO TO' key. For example to set navigation to cursor, pressing 'GO TO' twice, or to delete navigation pressing this key for 3 times.

The software keys (soft keys)

The software keys (soft key) have different functions according to the modes of operation: their labels for the current functions, located on the front panel, are shown on the screen right above the soft key. When the soft key labels are shown, by pressing the associated soft key the relative function is executed. By pressing 'CLEAR' the four soft key labels disappear.

When the soft key labels are not shown and any menu is not open, by pressing one of the four soft keys their labels for the current functions are shown on the screen immediately above the soft keys:

'SETTING' : selects the Setting Menu

'MAP' : selects the Map Menu

'DATA' : select the Data Menu

'FOCUS' : is active only if the Fish Finder mode has been selected. Allows to select the active page among the charting page and the Fish Finder page. Refer to the related User Manuals for more information.

NAV-STATION 5/11:**The 'POWER' key**

Press and hold 'POWER' down for 1 second to turn the chart plotter On. Press and hold 'POWER' down (once the chart plotter has been turned On) for 3 seconds turns the chart plotter Off.

NAV-STATION 5/11:**The 'DATA' key**

Has the same function as the 'DATA' soft key: opens the Data Menu, selecting the desired configuration (lines and values number) for the data window.

NAV-STATION 11:**The 'FIND' key**

Allows to find Port Services, Port By Name, Port By Distance, Tide Stations, Wrecks, Obstructions, Cursor, Lakes Info, Lakes By Name, Points of Interest, Coordinates and User Points.

NAV-STATION 11:**The 'SERVICE' key**

Has the same function as the 'SETTING' soft key: opens the Main Menu.

NAV-STATION 11:**The numeric keys**

The numeric/alphanumeric keys allow to make easy the numbers/names inserting. Pressing the key the first time, the first letter is inserted, the second time the second letter, the third time the third letter, the fourth time the number is inserted. After a few seconds from the number/letter inserting, the character is confirmed and the cursor is moved on the next position. The numbers/names inserting is possible using the cursor key too.

2.2 TURNING THE CHART PLOTTER ON AND OFF

Before powering On the chart plotter, check for the correct voltage (10-35 volt dc for **NAV-STATION 5/11**, 10-18 volt dc for **NAV-STATION 6**) and the correct connections with the positioning instrument.

2.2.1 TURNING ON

- Press and hold 'POWER' for 1 second

NAV-STATION 6:

- Press and hold any key for 1 second

The chart plotter emits one rapid beep sound and a title page is opened. After a few seconds, the Caution Notice 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.

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 chart plotter will remain On.

NAV-STATION 6:

- Press any soft key + 'SETTING' + "SHUT DOWN" + 'ENTER' + 'ACCEPT'

2.3 LCD ADJUSTMENT

To adjust the brightness and contrast of the LCD screen follow the procedure:

➤ **'PAGE' for 1 second**

or:

➤ **Press any soft key + 'SETTING' + "LCD Adjustment" + 'ENTER'**

CHOICE FOR NAV-STATION 11:

➤ **'SERVICE' + "LCD Adjustment" + 'ENTER'**

On the screen two control bars appear, that indicate the actual values for contrast and brightness.

The screen brightness can be controlled using the 'BRIGHT -' and 'BRIGHT +' soft keys: adjusting the control bar the backlight reaches the desired level. Press 'ENTER' to confirm the new value (the soft key and the graphic windows disappear from the screen). Otherwise pressing 'CLEAR' exits from this menu without changes. To modify the contrast value follow the same procedure, using the 'CONTR -' and 'CONTR +' soft key.

The new values for contrast and brightness are retained until they are reset.

2.3.1 PALETTE *(FOR COLOR CHART PLOTTER)*

It is possible to set the palette used to enhance the visibility of the screen depending on the surrounding light condition. To select this option:

➤ **'PAGE' for 1 second**

or:

➤ **Press any soft key + 'SETTING' + "LCD Adjustment" + 'ENTER' + 'PAGE'**

CHOICE FOR NAV-STATION 11:

➤ **'SERVICE' + "LCD Adjustment" + 'ENTER' + 'PAGE'**

It is possible to select Normal, Sunlight, Night Vision or NOAA for Palette. **Normal** is recommended when the chart plotter 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 original paper charts. **Sunlight** is designed to enhance the visibility of the screen when the chart plotter 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. **Night Vision** is recommended when the environment is dark in order to reduce the glare of the display. The chart plotter displays maps and screen in darker colors. **NOAA** allows setting NOAA paper chart colors presentation.

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.

➤ **Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "Language" + 'ENTER'**

CHOICE FOR NAV-STATION 11:

➤ **'SERVICE' + "SETUP" + 'ENTER' + "Language" + 'ENTER'**

Choose the language you prefer and press 'ENTER' to confirm.

2.5 EXTERNAL CONNECTIONS

2.5.1 GPS CONNECTION *(FOR PLOTTER WITH EXTERNAL GPS RECEIVER)*

Connects the GPS to the GPS Port 1/2/3 (NAV-STATION 11: Ports 4 and 5 too). To choose your preferred setting follow the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3 Input" (NAV-STATION 11: "Port 1/2/3/4/5 Input") + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3/4/5 Input" + 'ENTER'

Then choose your preferred setting among the NMEA available settings NMEA-0183 1200-N81-N, NMEA-0183 4800-N81-N, NMEA-0183 4800-N82-N, NMEA-0183 9600-N81-N, NMEA-0183 9600-O81-N (the default setting is NMEA-0183 4800-N81-N) and press 'ENTER' to confirm.

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

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3 Input" (NAV-STATION 11: "Port 1/2/3/4/5 Input") + 'ENTER' + "NMEA-0183 4800-N81-N" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3/4/5 Input" + 'ENTER' + "NMEA-0183 4800-N81-N" + 'ENTER'

2.5.2 AUTOPILOT CONNECTIONS

To connect the Autopilot to the serial Port 1/2/3 (NAV-STATION 11: Ports 4 and 5 too). To choose your preferred setting follow the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3 Output" (NAV-STATION 11: "Port 1/2/3/4/5 Output") + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3/4/5 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 1/2/3 (NAV-STATION 11: Ports 4 and 5 too). To choose your preferred setting follow the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3 Input" (NAV-STATION 11: "Port 1/2/3/4/5 Input") + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3/4/5 Input" + 'ENTER'

Then choose your preferred setting among the NMEA available settings NMEA-0183 1200-N81-N, NMEA-0183 4800-N81-N, NMEA-0183 4800-N82-N, NMEA-0183 9600-N81-N, NMEA-0183 9600-O81-N (the default setting is NMEA-0183 4800-N81-N) and press 'ENTER' to confirm.

2.5.4 C-COM CONNECTIONS

To connect the modem C-COM to the chart plotter Port 1 verify that the Port 1 setting is the following:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER' + "C-COM" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1 Input" + 'ENTER' + "C-COM" + 'ENTER'

Note

The connection is valid for the C-COM IR and C-COM RS232 too.

Also the modem C-COM can be connected to the Ports 2, 3 (NAV-STATION 11: Ports 4 and 5 too), in this case set the format for the selected Port.

2.5.5 EXTERNAL ALARM CONNECTION

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

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "EXTERNAL ALARMS" + 'ENTER' + "ON" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ALARMS" + 'ENTER' + "EXTERNAL ALARMS" + 'ENTER' + "ON" + 'ENTER'

Note

The connection is available also on the AUX-IN I/O Port.

2.6 C-CARD

The chart plotter 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 Memory C-CARD can be used to permanently store your Marks, Events, Waypoints, routes and tracks.

Note

During normal operations the C-CARD should not be removed since the chart plotter may lock up.

2.7 SIMULATION MENU

Used in order to use your chart plotter without input data. It generates a display with a moving vessel, so that you can practice using the controls in safety.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "SIMULATION" + 'ENTER'

2.7.1 SIMULATION MODE

Enables (On) or disables (Off) the Simulation mode. The default setting is Off.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "SIMULATION MODE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "SIMULATION" + 'ENTER' + "SIMULATION MODE" + 'ENTER'

2.7.2 SPEED

Sets the value for speed in the Simulation mode. The default setting is 01.0 Kts.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "SPEED" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SIMULATION" + 'ENTER' + "SPEED" + 'ENTER'

2.7.3 HEADING

Sets the desired value for heading in Simulation mode. The default setting is 000° M.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "HEADING" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SIMULATION" + 'ENTER' + "HEADING" + 'ENTER'

2.7.4 DATE

Sets the date of the simulated fix.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "DATE" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SIMULATION" + 'ENTER' + "DATE" + 'ENTER'

2.7.5 TIME

Sets the time of the simulated fix.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "TIME" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SIMULATION" + 'ENTER' + "TIME" + 'ENTER'

2.7.6 CURSOR CONTROL

Enables (On)/disables (Off) the cursor control. The default setting is Off.

- Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "CURSOR CONTROL" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SIMULATION" + 'ENTER' + "CURSOR CONTROL" + 'ENTER'

3. For the New User

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

1) Your chart plotter must have been installed properly according to the installation instruction.

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

3) You must have Power On to the chart plotter and adjust the brightness and contrast of the display.

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

3.1 SCREEN DISPLAY CONFIGURATION

The chart plotter screen is displayed in several modes: as Chart page, Depth Graph page, Chart + Depth Graph page or Highway 3D page. In the following paragraphs are displayed examples of these pages, the Text Area configuration can be quite different depending from the used chart plotter.

Note

If the Fish Finder or Radar* is connected, other displaying pages are available too. See the Fish Finder or Radar* User Manual for more information.

***ONLY FOR NAV-STATION 11**

At the same time as these pages displayed, it is possible to show on the screen the display of chart and/or navigation information:

➤ **Press any soft key + 'DATA'**

CHOICE FOR NAV-STATION 11:

➤ **'DATA'**

DATA				
↓	Data	Info1	Info2	Info3
X	CHRT	ICDH GPS Fix Status	SCALE Chart Scale	DOB Speed Over Ground
✓	LAT/LON	LATITUDE Fix Position Latitude	LONGITUDE Fix Position Longitude	COG Course Over Ground
✓	GOTO 1	DEST Destination Name	DET Distance Ship To Destination	TTO Time To Go
✓	GOTO 2	LAT/LON Destination Position	XTC Cross Track Error	STR Steering
X	GPS	HDOP Horizontal Dilution Of Precision	VDOP Vertical Dilution Of Precision	Sat. # Satellites In Use
X	WIND	RWS Rawwind Wind	RWD Rawwind Wind	WWS Wind Speed
✓	VARIOUS	COG Course Over Ground	DEPTH Water Depth	TEMP Water Temperature
X	TRIP	PTL Partial Trip Log	TTL Total Trip Log	HDG Compass Heading

Fig. 3.1 - Example of Data page

The Data Menu appears on the screen, allowing to select the number of lines (max 4) and the values that are shown in the Text Area. The first column says that the line is displayed (✓) or not (X): moving the cursor up and down select the desired line and using 'ENTER' to select it. It is possible to select max 4 lines. After

pressing 'ENTER' the data type has been selected. Pressing 'CLEAR' closes the Data Menu and the Text Area changes related to selected data.

3.1.1 CHART DATA

It is very important to know what is displayed on the screen.

- 'PAGE' + "CHART" + 'ENTER' + 'CLEAR'
shows the chart and the Text Area (if selected).

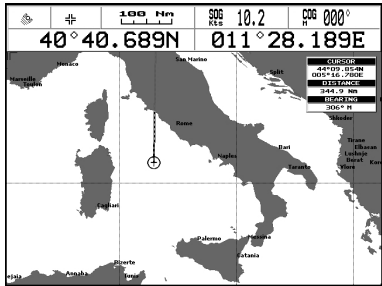


Fig. 3.1.1 - A Text Area configuration

3.1.2 DEPTH GRAPH PAGES

The Depth Graph can be selected in two different modes: in a reduced form on the right side of the screen or at full screen. To select the Depth Graph on the right side of the screen, select Chart and Depth Graph:

- 'PAGE' + "CHART" + 'ENTER' + "DEPTH" + 'ENTER' + 'CLEAR'

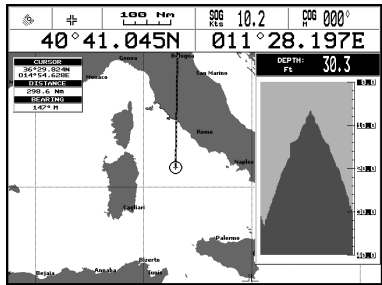


Fig. 3.1.2 - Example of Depth Graph on the right side of the screen

Otherwise to select the Depth Graph at full screen, select only the Depth Graph (do not select Chart):

- 'PAGE' + "DEPTH" + 'ENTER' + 'CLEAR'

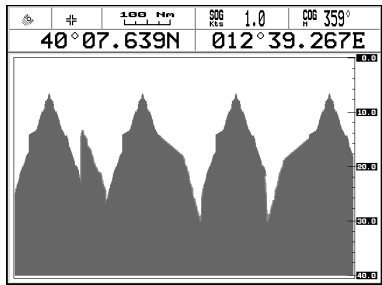


Fig. 3.1.2a - Example of Depth Graph at full screen

3.1.3 HIGHWAY 3D

The Highway 3D page displays the navigation data in graphic mode. It is possible to set the information in the page according to the user requirements (see Par. 3.1).

➤ 'PAGE' + "HIGHWAY 3D" + 'ENTER' + 'CLEAR'

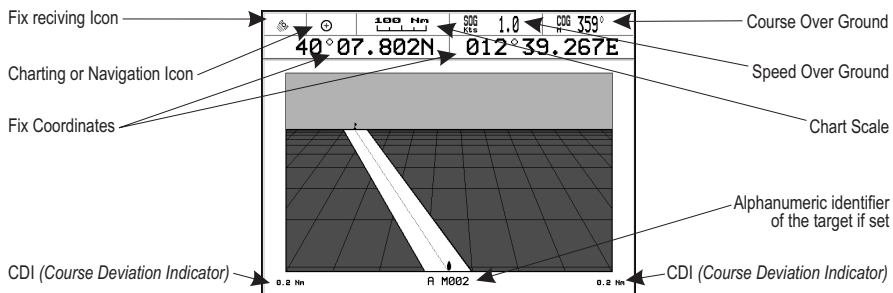


Fig. 3.1.3 - Example of Highway 3D page

3.2 MAP ORIENTATION

Selects the orientation of your chart according to: North Up (the map is shown with North upwards) or Track Up (the map is displayed with the currently selected course leg upwards). The default setting is North Up.

➤ Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "Map Orientation" + 'ENTER' CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "SETUP" + 'ENTER' + "Map Orientation" + 'ENTER'

If Track Up has been selected, a window is shown to insert the Map Resolution.

3.3 NAVIGATING TO A SINGLE DESTINATION

3.3.1 DISTANCE AND BEARING TO TARGET

Place the cursor on location to navigate to and press 'GO TO', select "CURSOR" and press 'GO TO' again or 'ENTER'.

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.

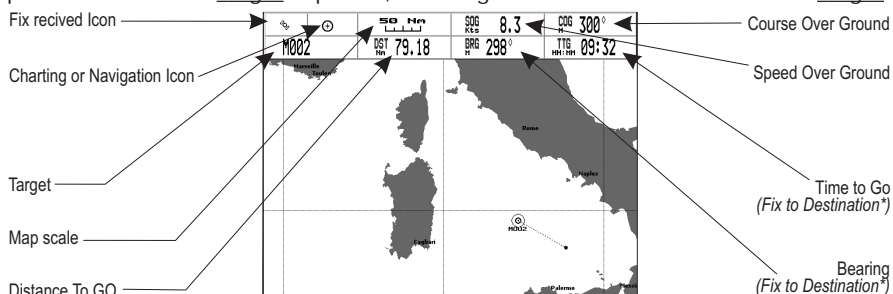


Fig. 3.3.1 - Navigation to a single destination

3.3.2 TIME TO GO

When the Target is set the TTG value (if selected) is displayed in the Text Area (see Fig. 3.4.1).

3.3.3 DELETING TARGET

Place cursor on Target icon, press 'STOP'. A window to confirm the navigation interruption appears on the screen. Press 'ENTER' or 'GO TO': the symbol that identifies Target remains on the screen until it is redrawn.

3.4 NAVIGATION ON A ROUTE

It is possible to define several positions, Waypoints, in a sequence called route and to navigate follow the route towards the end point.

3.4.1 ADDING WAYPOINT

To create a Waypoint place the cursor on the desired position, press 'ENTER', select "WAYPOINT", press 'ENTER' again. The Waypoint is shown on the screen and it becomes the first point of the first route. A window with information on route number, symbol and name, Latitude/Longitude of Waypoint is shown on the screen. Also it is indicated the distance to cover (and/or covered, if there are several Waypoints) refer to the next Waypoint.

3.4.2 CREATING A ROUTE

Repeat the "Adding Waypoint" procedure described in the previous Par. 3.5.1. 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; the distance to cover is shown too.

3.4.3 DELETING WAYPOINT

To delete the Waypoint, place the cursor on the desired Waypoint, press 'DELETE'. Press 'ACCEPT' to confirm the deletion. 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.

When the cursor is placed on the desired starting Waypoint (it can be the first Waypoint of the route or not) press 'GO TO', select "CURSOR" and press 'GO TO' again or 'ENTER'. The Waypoint symbol is shown enclosed in a circle and a dot line connecting the Target with the ship. All navigation data are referred to the Target placed.

The Target automatically is moved on the next Waypoint on the route when the Target is reached.

Otherwise placing the cursor on Target and pressing 'NEXT' the Target is moved on the next Waypoint on the route. The cursor is moved on the actual Waypoint Target (if the Target is placed on the last Waypoint on the route 'NEXT' is not active). When the cursor is on the Target, pressing 'PREVIOUS' the Target is moved on the previous Waypoint in the route. The cursor is moved on the actual Waypoint Target (if the Target is on the first Waypoint of the route 'PREVIOUS' is not active).

3.4.4 TIME TO GO

When the Target is placed the TTG value (if selected) is shown in the Text Area.

3.4.5 DELETING TARGET

Place cursor on Target icon, press 'STOP'. A window to confirm the navigation interruption appears on the screen. Press 'ENTER' or 'GO TO': the symbol that identifies Target remains the screen until it is redrawn.

3.5 INFORMAZIONI CARTOGRAFICHE C-MAP NT MAX

MAX is a major evolution of the NT/NT+ product technology. Key points are:

3.5.1 NEW DATA FEATURES

- Tides and Currents (intuitive arrows show direction and strength)
- World Background Charts with terrestrial data
- Value Added Data (Pictures and Diagrams, Land Data)
- Enhanced Port Info

3.5.2 NEW PRESENTATION FEATURES

- Clear View (advanced legibility techniques providing more chart data on the screen)
- Clear Info (sophisticated "Human Dictionary" to translate Nav-Aid abbreviations found on paper charts)
- Dynamic Fonts and Symbols
- Dynamic Nav-Aids (an innovative and dynamic presentation mode)
- Flexi-Zoom (increased Under and Over Zoom between chart levels, resulting in optimal scale display for any situation)
- Dynamic Elevation Data (optimized palettes for chart plotters with 256 or more colors; includes new NOAA palette for US market)
- Perspective View ("Real World" perspective view of the chart, updated real-time during navigation)

3.5.3 MAX AND NT/NT+ C-CARD COEXISTENCE

- When NT+ data and MAX data cover different areas, the chart plotter gets data from both charts (depending on the current position).
- When NT+ data and MAX data cover the same area, the chart plotter gets data only from MAX chart.

3.6 BACKGROUND CHARTS

The internal background charts can be updated to include the MAX A and B level charts which provide improved marine data, rivers, lakes, terrestrial data (major streets, highways, railways, etc...), nav-aids, depth areas, territorial water areas, etc... by reading them from a special data C-CARDS (contact your local dealer).

3.7 PICTURES & DIAGRAMS

The MAX data format allows assigning one or more image to any cartographic object. These *Pictures* are typically used to facilitate the identification of cartographic objects or places around the map: they can be the landscape layout nearby a harbor, the shape of a bridge or of a buoy etc.

On some objects, such as bridges, the image associated can represent the *Diagram* representing the shape of the objects and the various characteristics (length, height, type of bridge etc.).

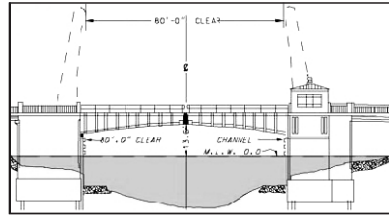


Fig. 3.7 - Pictures and Diagrams

3.7.1 QUICK INFO ON OBJECTS WITH PICTURES

On the Quick Info, there will be the camera icon on the top bar of the window if at least one of the objects found has one or more pictures associated.

3.7.2 EXPANDED INFO ON OBJECTS WITH PICTURES

On the Full Info, there will be the small camera icon on a corner of the square containing the object icon or a big photo icon centered on the square for the object without icon.

To see the picture press '**PICTURE**' when the object with a picture is highlighted.

3.7.3 CHANGE PICTURE SIZE

When the picture is shown, it is possible to fit it to screen by pressing '**ENTER**'.

3.8 MAP MENU

- To select the map configuration (available only from the chart page):
- Press any soft key + '**MAP**'

3.8.1 ZOOM TYPE

- Press any soft key + '**MAP**' + "**ZOOM TYPE**" + '**ENTER**'

This feature allows more expansions or compression of the chart scale while zooming in or out. Zoom Mode has two options; **STANDARD** (default) or **FLEXI-ZOOM**. When in **FLEXI-ZOOM** mode, a short '**ZOOM...**' push causes a change of chart, whilst a long '**ZOOM...**' push (press and hold) causes a pop-up window to be displayed on a corner of the screen. The window shows the current Zoom Factor.

By pressing '**ZOOM IN**'/'**ZOOM OUT**' the map is expanded or compressed according to the zoom factor selected.

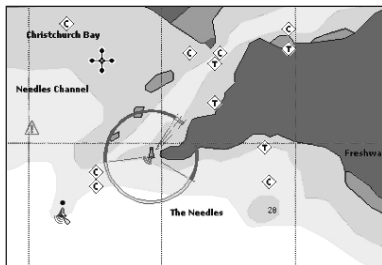
The Window is automatically closed if 'ZOOM...' is not pressed for 2 seconds and the selected zoom factor will be used at the next zoom in/out.

3.8.2 FONTS & SYMBOLS

➤ Press any soft key + 'MAP' + "FONTS & SYMBOLS" + 'ENTER'

On MAX charts it is possible to set the size of all names and symbols drawn on the charts, selecting between Normal size (the regular characters size) and Large size.

NORMAL size



LARGE size

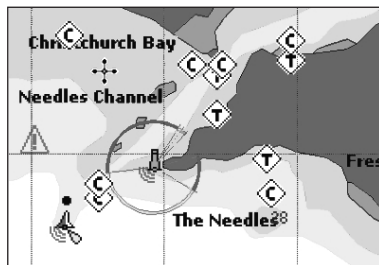


Fig. 3.8.2 - Example of Normal size (on the left side) and Large size (on the right side) settings

3.8.3 PERSPECTIVE VIEW

➤ Press any soft key + 'MAP' + "PERSPECTIVE VIEW" + 'ENTER'

Chart data may be projected in perspective mode during navigation. This function allows setting the panoramic View of the chart.

As the upper side of the map is more compressed than the lower side, a wider map area is visible. The perspective view allows showing more chart information immediately ahead and around the cursor.

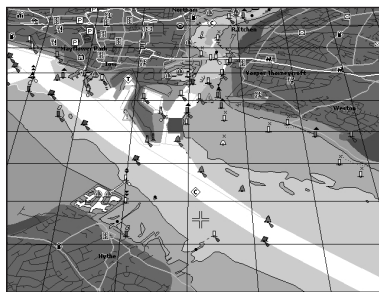


Fig. 3.8.3 - Perspective View

3.8.4 DYNAMIC NAV-AIDS

➤ Press any soft key + 'MAP' + "DYNAMIC NAV-AIDS" + 'ENTER'

This function allows settings blinking lights on Nav-Aids. The blink period and color of each Nav-aid is read from the Nav-Aid attributes available on the data cartridge. When the ship is inside the Nav-Aid nominal range, the light of the Nav-Aid will start blinking.

When Dynamic Nav-Aids option is set to On, when the flashing light is Off, or when fix position is out of the sector, the light color is displayed by using a faint light color.

3.8.5 MIXING LEVELS

➤ Press any soft key + 'MAP' + "MIXING LEVELS" + 'ENTER'

When the map coverage at the current zoom level does not fill the entire screen, the chart plotter 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 the chart plotter zooms out to the first level covered by cartographic data. The default setting is Off.

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

3.8.6 SAFETY STATUS BAR (DSI = Data Safety Indicator)

➤ Press any soft key + 'MAP' + "SAFETY STATUS BAR" + 'ENTER'

The possible choices are listed in the table below:

- ON : the Safety Status Bar is shown
OFF : the Safety Status Bar is not shown
ICON: the Safety Status Bar is not shown, but a Warning alarm Icon will blink on the corner of the map screen as soon as any item controlled by the DSI (Data Safety Indicator) function returns an alarm condition. The Warning Icon remains displayed until the alarm condition persists.
When Safety Status Bar is On, a status bar with six boxes showing the status of certain functions is displayed. Any warning or alarm condition is identified by the red color to indicate possible risk.

①	②	③	④	⑤	⑥
NORMAL	BEST MAP	DATA OFF	DECLUT.	DANGERS	CAUTIONS

Fig. 3.8.6 - Safety Status Bar

Boxes definition is as follows:

- ① **Zoom**
Normal : when the chart is displayed at normal scale.
U. Zoom : red when the chart is under-zoomed out more than twice normal scale, gray otherwise.
O. Zoom : red when the chart is over-zoomed in more than twice normal scale, gray otherwise.
Chart Lock: red when the chart is zoomed in more than twice normal scale, gray otherwise.
- ② **Best Map**
Red when a more detailed chart is available under the cursor position.
- ③ **Data Off**
Red when at least one of the following objects or layers is turned off (by the user): Depths/soundings; Wrecks/obstructions; Tracks/routes; Attention areas; Nav-Aids.
- ④ **Declutter**
Displays when Clear View function is On.
- ⑤ **Dangers**
Red when "Guardian Technology" detects one of the following objects: Land, Inter-tidal, Depth Area, Rocks, Obstructions, Shoreline Constructions, Fishing Facility, Wrecks, Dragged area, Diffusion area, Mooring facilities, Pingos and Production installations.

⑥ Caution

Red when "Guardian Technology" detects cautionary or restricted area.

3.8.7 CURRENTS PREDICTION

- Press any soft key + 'MAP' + "CURRENTS PREDICTION" + 'ENTER'.

It is possible to see the variation of the Tidal arrows on the selected area at any given time. A window is shown on the low-left side of the chart, press 'SET' to set data and time, and 'DECR'/'INCR' to decrease/increase the time. Press 'EXIT' to exit.

3.9 INFO FUNCTION

Place the cursor on the desired position then:

- Press any soft key + 'MAP' + "INFO" + 'ENTER' to display the Info tree and the expanded Info page.

3.9.1 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. To select the next page press 'PAGE DN'. 'HOME' restarts the Expanded Info function.

3.9.2 GETTING TIDE INFO

To obtain Tide Info:

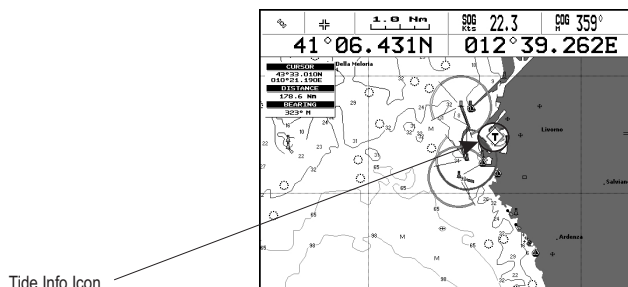


Fig. 3.9.2 - Tide Info Icon

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

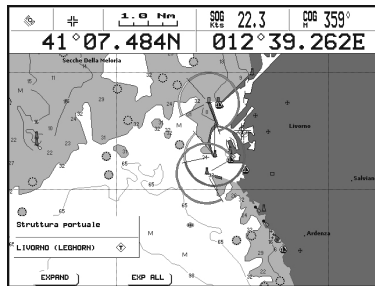


Fig. 3.9.2a - Automatic Info on Tide

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

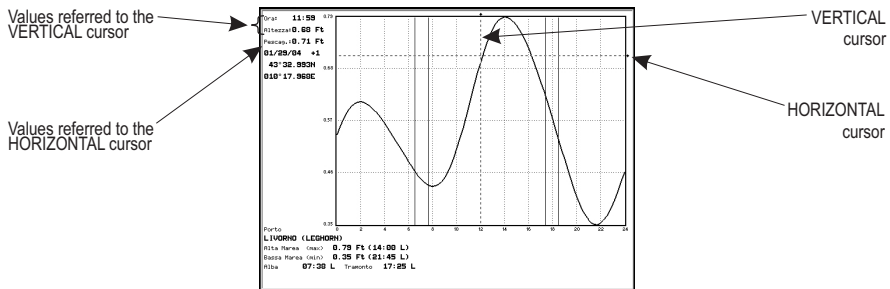


Fig. 3.9.2b - Tide Graph

Using the cursor key, it is possible to move the cursor anywhere on the graph and display the time, height (vertical cursor) and drought (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 cursor key up/down to insert the desired 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.

3.9.3 GETTING PORT INFO

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

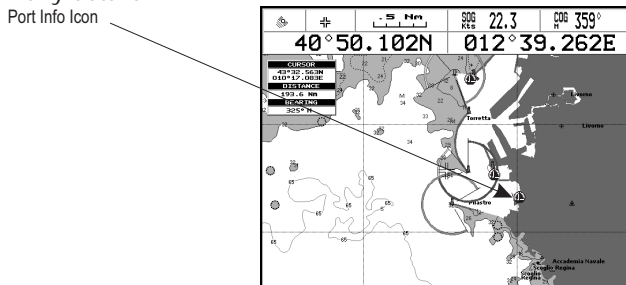


Fig. 3.9.3 - Port Info icon

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

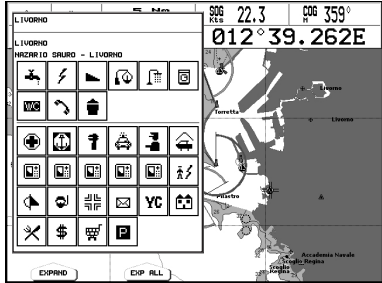


Fig. 3.9.3a - Automatic Info window

To expand information on the object press 'EXPAND' (otherwise press 'EXP ALL' to select all available information).

3.9.4 ENHANCED PORT INFO

MAX charts include additional port services that were not present before. Additional attributes of Port Areas and Port Marinas have been included (Location, Country, Region, State, Harbor master telephone number etc).

3.10 MAP SETTINGS

This menu allows the user to customize the screen:

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER'

3.10.1 DISPLAY MODE

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "DISPLAY MODE" + 'ENTER'

Selects from a predefined table what cartographic objects are displayed and which display options are set. Preprogrammed settings are user selectable from Full, Medium, Low, Radar, Tides, Custom.

The table below shows the selections for each mode:

Setting	Full	Medium	Low	Radar	Tides	Custom (Default values)
Place Names	On	On	On	On	On	On
Name Tags	On	Off	Off	Off	Off	Off
Nav Aids & Light Sectors	On	No Sector	No Sector	No Sector	Off	On
Attention Areas	On	On	Off	Off	Off	On
Tides & Currents	On	Off	Off	Off	On	On
Seabed Type	On	Off	Off	Off	Off	On
Ports & Services	On	On	Off	On	Off	On
Tracks & Routes	On	Off	Off	Off	Off	On
Depth Range Min (*)	0 Mt	0 Mt	0 Mt	0 Mt	0 Mt	0 Mt
Depth Range Max	9999 Mt	9999 Mt	9999 Mt	9999 Mt	9999 Mt	9999 Mt
Land Elevations	On	On	Off	Off	Off	On
Land Elevation Values	On	Off	Off	Off	Off	On
Roads	On	Off	Off	Off	Off	On
POI	On	Off	Off	Off	Off	On
Lat/Lon Grid	On	Off	Off	Off	Off	On
Chart Boundaries	On	Auto	Off	Off	Off	Auto

Value-Added Data	On	Off	Off	Off	Off	On
Chart Lock	On	On	On	On	On	On
Underwater Objects Limit	9999 Mt	10 Mt	10 Mt	10 Mt	10 Mt	10 Mt
Rocks	Icon+Depth	Icon	Icon	Icon	Icon	Icon
Obstructions	Icon+Depth	Icon	Icon	Icon	Icon	Icon
Diffusers	Icon+Depth	Icon	Icon	Icon	Icon	Icon
Wrecks	Icon+Depth	Icon	Icon	Icon	Icon	Icon

Note*

Only for color chart plotter.

The following are the available selections only if Custom has been selected:

Place Names: Turns On/Off the displaying of the Names. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Place Names" + 'ENTER'

Name Tags: Displays a tag for particular chart objects that either includes the Name of the chart object or the Depth of an Underwater chart object. Already available for Buoys, the feature has now been extended for Towers, Beacons and Port Marinas. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Name Tags" + 'ENTER'

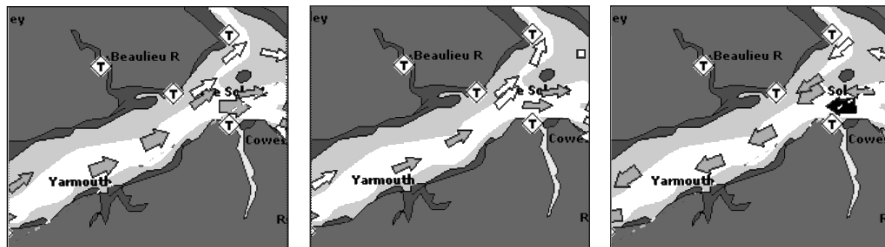
Nav-Aids & Light Sectors: Turns On (Nav-Aids & Light Sectors are shown)/Off (Nav-Aids & Light Sectors are not shown)/No Sector (Nav-Aids are shown, Light Sectors are hidden). The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Nav Aids & Light Sectors" + 'ENTER'

Attention Areas: Enables (On) or disables (Off) the displaying of the Attention Areas (areas in which special attention by the mariner is required, because of natural or man-made hazards, or sailing regulations and restrictions).

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Attention Areas" + 'ENTER'

Tides & Currents: On/Off. The new worldwide database with tidal stream information is now available with MAX C-CARDS.



When data/time is available, Tidal stream arrows are shown on the charts, indicating the direction and strength of the Tide. If no data/time is available from the GPS or the chart plotter is not in Simulation mode, the icon on the map is generic one. The color of the arrow denotes the strength of the current as follows:

0 to 0.1 kn	-		Yellow
0.2 to 1.0 kn	-		Yellow
1.1 to 2.0 kn	-		Orange
2.1 to 3.0 kn	-		Orange
3.1 to 9.9 kn	-		Red

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Tides & Currents" + 'ENTER'

Seabed Type: Turns On/Off the displaying of the Seabed Type. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Seabed Type" + 'ENTER'

Port & Services: To locate and display the nearest available facilities of a particular type (i.e. the nearest Hospital, sailmaker, bank, etc.). The icons list of the available services is shown on the screen.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Port & Services" + 'ENTER'

Tracks & Routes: Turns On/Off the displaying of Tracks and Routes (recommended and established routes for ships at sea, including traffic separation schemes, deep water routes, ...). The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Tracks & Routes" + 'ENTER'

User Points: Turns On (enables the User Points display)/Icon (enables only the User Points icons display)/Off (disables the User Points display).

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "User Points" + 'ENTER'

Depth Range: (FOR NAV-STATION 5 AND NAV-STATION 6) Turns On/Off.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Depth Range" + 'ENTER'

Depth Range Min: (FOR COLOR CHART PLOTTER) Allows to insert a minimum value for the depth range.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Depth Range Min" + 'ENTER'

Depth Range Max: Allows to insert a maximum value for the depth range.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Depth Range Max" + 'ENTER'

Land Elevations: It is possible to set On/Off the Land Elevation display. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Land Elevations" + 'ENTER'

Land Elevation Value: It is possible to set On/Off the Land Elevation Values display. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Land Elevation Value" + 'ENTER'

Roads: Enables or disables the displaying of Roads on the screen.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Roads" + 'ENTER'

POI: Enables or disables the displaying of POIs (Points Of Interest). The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "POI" + 'ENTER'

Lat/Lon Grid: Turns On/Off the displaying of the Latitude and Longitude Grids. The default setting is On.

- Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Lat/Lon Grid" + 'ENTER'

Chart Boundaries: Enables (On) or disables (Off) the displaying of the Chart Boundaries. Selecting Auto instead, if we are in background charts only the first charts level contained in the C-CARD are displayed, if we are in a charts level contained in the C-CARD the next four charts level are displayed. The default setting is On.

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Chart Boundaries" + 'ENTER'**

Value-Added Data: The Value Added Data (VAD) is a collection of additional cartographic objects which are not present on the original paper chart (from which the electronic chart derives). These objects have been obtained from other sources (that C-MAP believes to be reliable) and then merged to the electronic charts in order to provide more information useful for the navigation.

VAD object can be any cartographic objects and it can be distinguished from the official-chart-objects from the Quick Info. A dedicated icon is shown on the Quick Info window to indicate that the object queried is a VAD.

The same icon is also shown on the Full Info page and in addition the extended text Value Added Data is shown on the details of the VAD object.

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Value-Added Data" + 'ENTER'**

Chart Lock: When Chart Lock is On, the available zoom scales are only the ones containing cartographic data. Instead when Chart Lock is Off, it is possible to zoom down into zoom scales not covered by cartographic data after the last available zoom scale covered by cartographic data.

Note

When an empty level is entered, the message "No cartographic coverage" is shown on a window in a corner of the map display. The warning message is always displayed as long as the current zoom has no data coverage.

The DSI window, if present, will show "NO CHART", when an empty level is entered in the location of map expansion mode.

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Chart Lock" + 'ENTER'**

Underwater Object Limit: Selects the max depth value to display Underwater Objects.

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Underwater Object Limit" + 'ENTER'**

If value is set to 0 Mt, the Underwater Objects are not shown on the charts. Menu options are grayed out.

If value is more than 0 Mt (i.e. 10 Mt), in the Range from 0 Mt to the selected value the Underwater Objects are displayed according to their setting below.

Rocks: Turns Off/Icon/Icon+Depth (*).

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Rocks" + 'ENTER'**

Obstructions: Turns Off/Icon/Icon+Depth (*).

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Obstructions" + 'ENTER'**

Diffusers: Turns Off/Icon/Icon+Depth (*).

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Diffusers" + 'ENTER'**

Wrecks: Turns Off/Icon/Icon+Depth (*).

- **Press any soft key + 'MAP' + "OTHER MAP CONFIGURATION" + 'ENTER' + "Wrecks" + 'ENTER'**

Note*

Choose the option:

OFF : the object is not visible independently of the selected "Underwater Object Depth Value"

ICON : the object icon is visible without tags, in the range selected from "Underwater Object Depth Value" option

ICON+DEPTH : the object icon and tag is visible, in the range selected from "Underwater Object Depth Value" option

3.10.2 GETTING AUTOMATIC INFO

The type of Automatic Info is user selectable.

- Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "Auto Info" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "SETUP" + '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 and areas).

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.

If you press 'EXPAND' you get the information about that object. Otherwise press 'EXP ALL' to select all available information.

3.10.2.1 Quick Info on Lakes

Upon viewing the chart of a lake, you will click on to query the available information immediately displayed with many details. Example: see the following picture:

Lakes Info icon

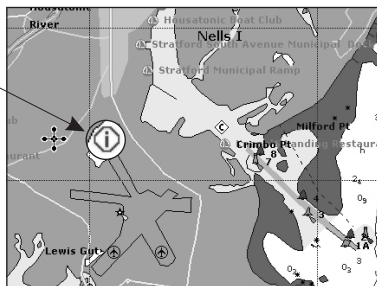


Fig. 3.10.2.1 - Example of Lakes info

When the cursor is placed over the icon, the icons of the available services are shown:

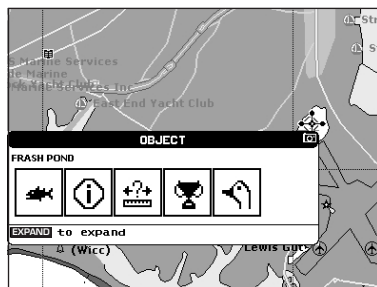


Fig. 3.10.2.1a - Quick Info: available services

If you press 'EXPAND' all available information about the cartographic point

under the cursor will be shown. See the next paragraph.

3.10.2.2 Full Info on Lakes

The following is an example of Full Info on Lakes:

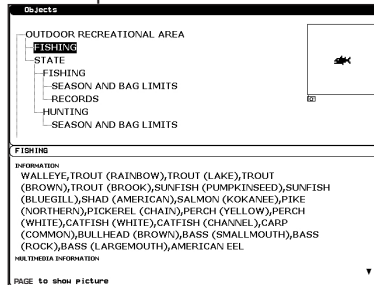


Fig. 3.10.2.2 - Example of Full Info page

To see the "Fishing" object press 'PAGE' (when the "Fishing" object is highlighted). On the screen appears:

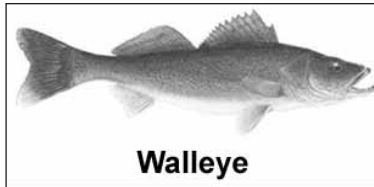


Fig. 3.10.2.2a - Example of picture associated to the Fishing object

3.11 FIND FUNCTION

The chart plotter allows to find and display on the screen the nearest and available objects: Port Services, Port By Name, Port By Distance, Tide Stations, Wrecks, Obstructions, Cursor, Lakes Info, Lakes By Name, Points of Interest, Coordinates and User Points. The research of these objects refers to the boat position (if a valid fix is received) or to the cursor position (if the received fix position is not valid).

3.11.1 FINDING PORTS SERVICES

To select the research of Ports Services (up to 10) (i.e. the nearest Hospital, sailmaker, bank, etc.) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT SERVICES" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'FIND' + "PORT SERVICES" + 'ENTER'

The icons of the available services are shown. Use the cursor key to select any facility and press 'ENTER' or 'FIND'. The list of the nearest ports containing the facility will be shown on the screen. Then choose the port you want and press 'ENTER' or 'FIND'.

3.11.2 FINDING PORTS BY NAME

To select the research of Ports By Name following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT BY NAME" + 'ENTER' + "SEARCH PORT" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "PORT BY NAME" + 'ENTER' + "SEARCH PORT" + 'ENTER'

Shows the list in alphabetical order of all ports stored on the C-CARD. To select next/previous page press 'ZOOM IN'/'ZOOM OUT' or use the cursor key up/down to slide in the list; otherwise press 'NAME' and use the cursor key to manually insert the name of port. Press 'ENTER' or 'FIND' to locate it on the map.

Note

To filter the list, select the distance range by following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT BY NAME" + 'ENTER' + "RANGE" + 'ENTER' + Insert the desired value

CHOICE FOR NAV-STATION 11:

- 'FIND' + "PORT BY NAME" + 'ENTER' + "RANGE" + 'ENTER' + Insert the desired value

3.11.3 FINDING PORTS BY DISTANCE

To select the research of Ports By Distance (up to 10) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT BY DISTANCE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "PORT BY DISTANCE" + 'ENTER'

Shows the list of ports stored on the C-CARD in closest distance order. Use the cursor key up/down to select one of them and press 'ENTER' or 'FIND' to locate it on the map.

3.11.4 FINDING TIDE STATIONS

To select the research of Tide Station (up to 10) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "TIDE STATIONS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "TIDE STATIONS" + 'ENTER'

Shows the list of Tide Stations. Choose one of them and press 'ENTER' or 'FIND' to display the Tide Graph page). Press 'CLEAR' to locate on the map the Tide Station chosen.

3.11.5 FINDING WRECKS

To select the research of Wrecks (up to 10) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "WRECK" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "WRECK" + 'ENTER'

Shows the list of wrecks stored on the C-CARD in closest distance order. Use the cursor key up/down to select one of them and press 'ENTER' or 'FIND' to locate it on the map.

3.11.6 FINDING OBSTRUCTIONS

To select the research of Obstructions (up to 10) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "OBSTRUCTIONS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "OBSTRUCTIONS" + 'ENTER'

Shows the list of obstructions stored on the C-CARD in closest distance order. Use the cursor key up/down to select one of them and press 'ENTER' or 'FIND' to locate it on the map.

3.11.7 FINDING CURSOR

To select the research of Cursor position following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "CURSOR" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'FIND' + "CURSOR" + 'ENTER'

Shows the cursor placing it on the center of the screen.

3.11.8 FINDING LAKES INFORMATION

To select the research of Lakes Information following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "LAKES INFO" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'FIND' + "LAKES INFO" + 'ENTER'

It finds the Outdoor Recreational Area objects. See the following picture:

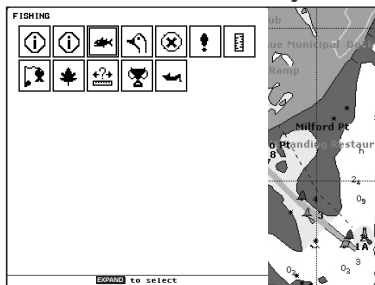


Fig. 3.11.8 - Outdoor Recreational Area objects

Use the cursor key to select any objects and press 'EXPAND'. The list of the nearest lakes (up to 10) containing the facility will be shown on the screen.

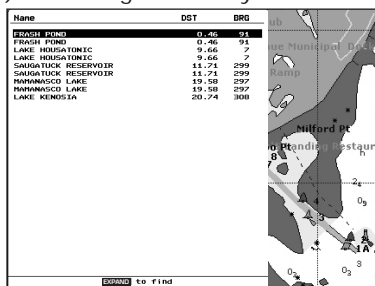


Fig. 3.11.8a - Nearest Lakes list

Choose the lake you want and press 'EXPAND': the Full Info page is shown.

3.11.9 FINDING LAKES BY NAME

To select the research of Lakes By Name following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "LAKES BY NAME" + 'ENTER' + "SEARCH LAKES" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'FIND' + "LAKES BY NAME" + 'ENTER' + "SEARCH LAKES" + 'ENTER'

Shows the list in alphabetical order of all lakes stored on the C-CARD. To

select next/previous page press 'ZOOM IN'/'ZOOM OUT' or use the cursor key up/down to slide in the list; otherwise press 'NAME' and use the cursor key to manually insert the name of lake. Press 'ENTER' or 'FIND' to locate it on the map.

Note

To filter the list, select the distance range by following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "LAKES BY NAME" + 'ENTER' + "RANGE" + 'ENTER' + Insert the desired value

CHOICE FOR NAV-STATION 11:

- 'FIND' + "LAKES BY NAME" + 'ENTER' + "RANGE" + 'ENTER' + Insert the desired value

3.11.10 FINDING POINTS OF INTEREST

To select the research of Points of Interest (POI) following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "POINTS OF INTEREST" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'FIND' + "POINTS OF INTEREST" + 'ENTER'

A sub-menu is shown to find different categories of POIs. Use the cursor key to select the category and press 'ENTER' to display the list of points. Press 'ENTER' again to locate the point on the map.

3.11.11 FINDING COORDINATES

To select the research of Coordinates following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "COORDINATES" + 'ENTER'

CHOICE FOR NAV-STATION 11:

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

Use the cursor key to manually insert the coordinates and press 'ENTER' or 'CONFIRM' to locate them on the map.

3.11.12 FINDING USER POINTS

To select the research of User Points following the procedure:

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

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

Use the cursor key to manually insert the user point name and press 'ENTER' or 'CONFIRM' to locate it on the map.

3.12 GPS PAGE

The GPS data page shows in graphic mode GPS data.

- Press any soft key + 'SETTING' + "GPS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "GPS" + 'ENTER'

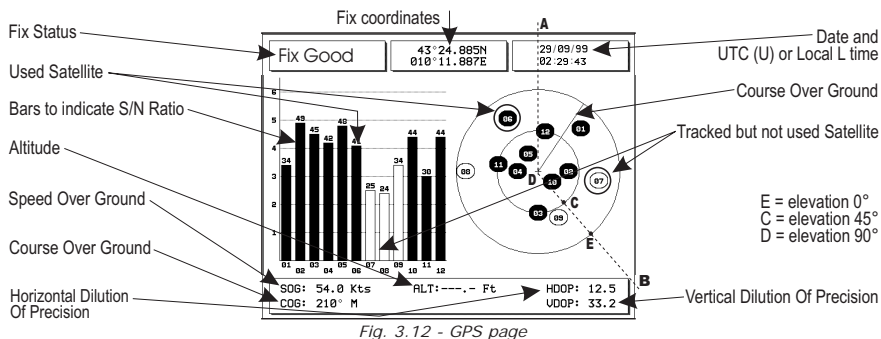


Fig. 3.12 - GPS page

On the right side of the screen, there is a polar representation of the azimuth and elevation of each satellites. The circle contains a number indicating the PRN of the satellite and it is filled when it is 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 solution. When a valid fix is received, the Lat/Lon, Date, Time, HDOP, VDOP, SOG, COG and Altitude are shown in the page.

3.13 ALARMS MENU

Sets the desired values/settings for the alarms.

3.13.1 AUTO OFF

If it is enabled, it allows to delete the alarm when the alarm condition is ended. The default setting is On.

➤ Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Auto Off" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "ALARMS" + 'ENTER' + "Auto Off" + 'ENTER'

3.13.2 ARRIVAL ALARM

Specifies the radius of a circle around the Waypoint of a route: when your vessel reaches this circle the alarm sounds. You can disable (Off) the Arrival Alarm or insert value. The default setting is 1.00 Nm.

➤ Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Arrival Alarm" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "ALARMS" + 'ENTER' + "Arrival Alarm" + 'ENTER'

3.13.3 XTE ALARM

Disables the XTE Alarm (Off) or selects the desired value. The default setting is Off.

➤ Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "XTE Alarm" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "ALARMS" + 'ENTER' + "XTE Alarm" + 'ENTER'

3.13.4 ANCHOR ALARM

This function allows inserting of the limit of anchor dragging: beyond that, the alarm is activated. The chart plotter computes the distance between the current GPS position and the GPS position saved at the activation of the anchor alarm in the menu. If the computed distance exceeds the value set in the menu, the chart plotter shows the alarm message and starts the acoustic alarm. The default setting is Off.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Anchor Alarm" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ALARMS" + 'ENTER' + "Anchor Alarm" + 'ENTER'

3.13.5 DEPTH ALARM

Audible and visible alarm activated when the depth (related to Depth) received by an echosounder is lower than the value set by the user. The default setting is Off.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Depth Alarm" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ALARMS" + 'ENTER' + "Depth Alarm" + 'ENTER'

3.13.6 HEADING ALARM

Enables or disables the Heading Alarm. The default setting is Off.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Heading Alarm" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ALARMS" + 'ENTER' + "Heading Alarm" + 'ENTER'

3.13.7 GROUNDING ALARM

The chart plotter is provided with a function that, by querying the map's data, verifies potential danger to navigation due to shallow water, land, rocks, obstructions and shoreline constructions. The maps are scanned periodically (every 10 seconds). When the Grounding Alarm is active, the chart plotter scans an area in front of the boat. This area is identified by a triangle drawn in front of the boat icon whose direction is determined by the current boat heading. The length of the triangle is user selectable and its angle is 30 degrees. If any of the above objects are found, the chart plotter notifies the danger on a dedicated warning message box in the Grounding Alarm Report page. The Grounding Alarm is switched Off by default after a Master Reset. Once the Grounding Alarm has been activated, a warning message is shown.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Grounding Alarm" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ALARMS" + 'ENTER' + "Grounding Alarm" + 'ENTER'

3.13.8 GROUNDING DEPTH LIMIT

Select the depth limit related to the Grounding Alarm. The default setting is 16 Ft.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Grounding Depth Limit" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ALARMS" + 'ENTER' + "Grounding Depth Limit" + 'ENTER'

3.13.9 GROUNDING ALARM RANGE

Allows setting the length of the sector to be detected among 0.25, 0.5, 1.0 Nm. The default setting is 0.5 Nm. When any of the searched objects is found in the scanned area, a tick marker is printed on the relative box in the Grounding Alarm Report page to identify which dangerous objects have been currently detected.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Grounding Alarm Range" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ALARMS" + 'ENTER' + "Grounding Alarm Range" + 'ENTER'

3.13.10 GROUNDING ALARM REPORT

Allows displaying the report of the dangerous objects (√) currently detected.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "Grounding Alarm Report" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ALARMS" + 'ENTER' + "Grounding Alarm Report" + 'ENTER'

3.13.11 EXTERNAL ALARM

Allows triggering an external alarm device. You can enable (On) or disable (Off) the External Alarm. The default setting is On.

- Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "External Alarm" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ALARMS" + 'ENTER' + "External Alarm" + 'ENTER'

4. For the Experienced

Now you have had a chance to become familiar with your new chart plotter, there are a great 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

To select the Routes menu:

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ROUTE" + 'ENTER'

The following functions are used for the route management.

4.1.1.1 Selecting Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER'

A window appears with the route number list and the related route name. Select the route number. The following functions are available:

Changing Notes

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'NOTES'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'NOTES'

Another window is opened: insert the notes (it is possible only if the route is already created). Press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise).

Route Color FOR COLOR CHART PLOTTER

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'COLOR'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'COLOR'

A window allows to choose the color, by using the cursor key. Press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise).

Displaying Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'HIDE'/'SHOW'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'HIDE'/'SHOW'

The function allows to hide/show the segment that joins the Waypoints.

4.1.1.2 Deleting Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "DELETE" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "DELETE" + 'ENTER'

A window is opened: press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise). The route remains on the screen shaded until the screen is redrawn.

4.1.1.3 Finding Info on Route: Route Data Report

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER'

The following functions are available:

Changing Fuel values

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'FUEL'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'FUEL'

- **Initial Fuel:** insert value by using the cursor key. Press 'CLEAR' to confirm.
- **Fuel:** insert value by using the cursor key to insert the forecast consumption (liters per hour). Press 'CLEAR' to confirm.

Press 'CLEAR' to confirm and to return to the previous menu.

Changing Speed values

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'SPEED'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'SPEED'

- **Manual:** insert value by using the cursor key. Press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise).
- **Auto:** is used the value automatically computed.

Reversing Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER' + 'REVERSE'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "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 Sending Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SEND" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "SEND" + 'ENTER'

It transmits the Active Route information onto the NMEA output port.
The NMEA WPL & RTE messages are sent to the output port.

4.1.1.5 Receiving Route

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "RECEIVE" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "ROUTE" + 'ENTER' + "RECEIVE" + 'ENTER'

It saves Route information received from the NMEA input port.

The received route is saved on the Active route, overwriting it. The NMEA WPL & RTE messages are sent to the input port.

4.1.1.6 Route Color FOR COLOR CHART PLOTTER

- Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "COLOR" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "ROUTE" + 'ENTER' + "COLOR" + 'ENTER'

A window allows to choose the color, by using the cursor key. Press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise).

4.1.2 WAYPOINTS

You may add Waypoints (see Par. 3.3.1), 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.

4.1.2.1 Adding Waypoints

➤ 'ENTER' + "WAYPOINT" + 'ENTER'

The Waypoint appears on the cursor position. An info window is shown containing route number, date and time, Waypoint name, symbol and Latitude/Longitude, information on previous/next Waypoint. It is also shown the distance to cover (and/or covered, if there are several Waypoints) refer to next Waypoint. The sequence of moving the cursor and pressing 'ENTER' selecting "WAYPOINT" and pressing 'ENTER' again is continued to create the route.

Every time you place the cursor on a Waypoint, the following functions are available:

4.1.2.2 Moving Waypoint

➤ Adding Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on Waypoint

Press 'Move'. Use the cursor key to move the cursor: a dotted line, connecting the Waypoint to the new position, is shown.

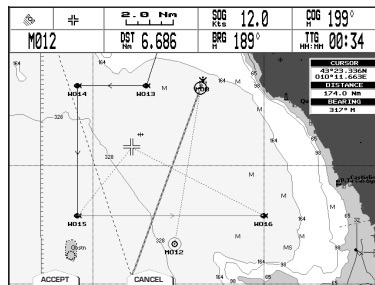


Fig. 4.1.2.2 - Moving Waypoint function (I)

Press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise) and the Waypoint will be placed in the new position.

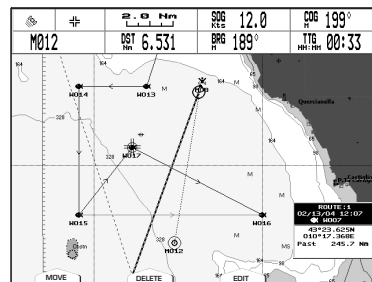


Fig. 4.1.2.2a - Moving Waypoint function (II)

The "old" Waypoint remains on the screen shaded until the screen is redrawn.

4.1.2.3 Deleting Waypoint

➤ Adding Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on Waypoint

Press 'DELETE'. A window is opened: press 'ENTER' or 'CONFIRM' ('CLEAR' or '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.

4.1.2.4 Editing Waypoint

➤ Adding Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on Waypoint

Press 'Edit'. A window will be shown with Symbol, Name, Color (ONLY FOR COLOR CHART PLOTTER) and Latitude/Longitude of the Waypoint.

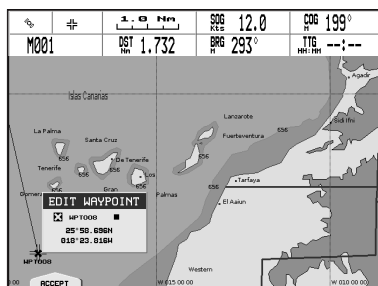


Fig. 4.1.2.4 - Edit Waypoint

Use the cursor key to select the field.

If Symbol field is selected, press 'ENTER': a window with 16 different symbols appears.

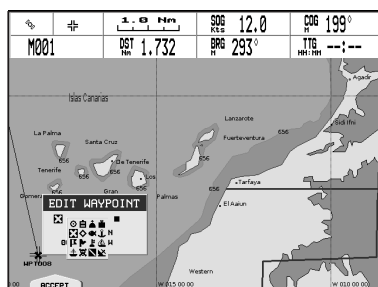


Fig. 4.1.2.4a - Waypoint symbols

Use the cursor key to select the symbol and press 'ENTER'.

If Name field is selected, press 'ENTER': use the cursor key to insert the character (8 characters max), then press 'ENTER'.

If Color field (ONLY FOR COLOR CHART PLOTTER) is selected, press 'ENTER': a window with 8 different colors appears. Use the cursor key to select the color and press 'ENTER'.

If Coordinates field is selected, press 'ENTER'. Use the cursor key to insert the value and press 'ENTER'.

Press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise).

4.1.2.5 Goto

➤ Adding Waypoint ('ENTER' + "WAYPOINT" + 'ENTER') or Place cursor on Waypoint

Press 'GO TO', select "CURSOR" and press 'GO TO' again or 'ENTER': a circle surrounds the Waypoint symbol. A line is shown, connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

Pressing 'GO TO', selecting "PREVIOUS GOTO" and pressing 'GO TO' again or 'ENTER', a windows appears on the screen containing coordinates of previous inserted Target. Select the desired Target and press 'GO TO' again or 'ENTER': the Target is placed on the selected previous Target.

Otherwise pressing 'GO TO', selecting "ROUTE" and pressing 'GO TO' again or 'ENTER', the Target is placed on the first Waypoint of the route.

Note that pressing 'GO TO', selecting "MARK" and pressing 'GO TO' again or 'ENTER', the User Points List is shown on the screen. Select the desired User Point (the Waypoint) and press 'GO TO' again or 'ENTER': the Target is placed on the selected Waypoint.

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

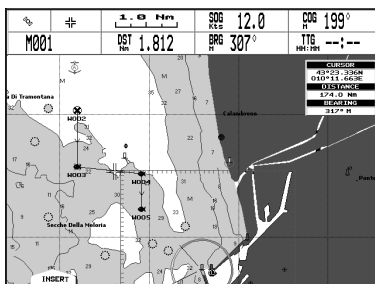


Fig. 4.1.2.6- Placing Waypoint between two existing ones (I)

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:

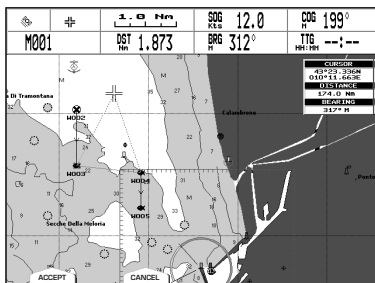


Fig. 4.1.2.6a - Placing Waypoint between two existing ones (II)

Once you have positioned the cursor at new location, press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise).

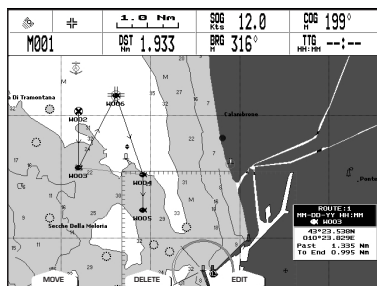


Fig. 4.1.2.6b - Placing Waypoint between two existing ones (III)

4.1.2.7 Finding Waypoint

- Press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'FIND' + "USER POINTS" + 'ENTER'

A window is shown to find the Waypoint inserting label. Using the cursor to insert the name and press 'ACCEPT' ('CANCEL' otherwise). For example, if the inserted name is W005, the cursor will be placed on this Waypoint, and the window containing route information is shown.

4.1.2.8 Finding information on Waypoints: User Points List page

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

A full page window is shown with information on stored User Points. Moving cursor up/down to select the desired User Point.

Note

In the list a circle surrounds the User Point symbol of the User Point on which the Target is set.

View Waypoint on the map

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'VIEW'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'VIEW'

The chart plotter exits from the User Points List page and redraws the map. On the screen the selected point appears centered, with the cursor placed on it. Press 'EXIT' to return to the User Points List page.

Find Waypoint in the User Points List page

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'FIND'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'FIND'

A window is shown to insert the name by using the cursor key. Press 'ENTER' and the chart plotter will point the Waypoint out in the User Points List page.

Deleting Waypoint

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'DELETE'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'DELETE'

Using the cursor key to select the Waypoint to delete and press 'DELETE'. A warning message appears, press 'ENTER' or 'Yes' ('CLEAR' or 'No' otherwise). If you want to delete the Waypoint on which Target is set, first delete the Target and then delete the Waypoint.

Deleting all stored User Points

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'DEL ALL'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER' + 'DEL ALL'

A warning message appears. Press 'ENTER' or 'Yes' ('CLEAR' or 'No' otherwise) to delete all stored existed User Points. If a Target is set on an User Point, first delete the Target and then delete all User Points.

4.1.2.9 Send Waypoints

To transmit all User Points onto the NMEA output port.

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "SEND" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

4.1.2.10 Receive Waypoints

To save all User Points received from the NMEA input port.

- Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

4.2 MARKS

You may tag a location on the chart with a Mark symbol and number, which you can record for later use.

4.2.1 ADDING MARK

- 'ENTER' + "MARK" + 'ENTER'

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

Every time you place the cursor on a Mark the following functions are available:

4.2.2 MOVING MARK

- Adding Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on Mark

Press 'Move'. Use the cursor key to move the cursor: a dotted line, connecting the Mark to the new position, is shown. Press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise) and the Mark will be placed in the new position. The "old" Mark, remains on the screen shaded until the screen is redrawn.

4.2.3 DELETING MARK

- Adding Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on Mark

Press 'DELETE'. A window is opened: press 'ENTER' or 'CONFIRM' ('CLEAR' or 'CANCEL' otherwise). The deleted Waypoint remains shaded until the screen is redrawn.

4.2.4 EDIT MARK

- Adding Mark ('ENTER' + "MARK" + 'ENTER') or Place cursor on Mark

Press 'Edit'. A window will be shown with Symbol, Name, Color (ONLY FOR COLOR CHART PLOTTER) and Latitude/Longitude of the Mark.

Use the cursor key to select the field.

If Symbol field is selected, press 'ENTER': a window with 16 different symbols appears.

Use the cursor key to select the symbol and press 'ENTER'.

If Name field is selected, press 'ENTER': use the cursor key to insert the character (8 characters max), then press 'ENTER'.

If Color field (ONLY FOR COLOR CHART PLOTTER) is selected, press 'ENTER': a window with 8 different colors appears. Use the cursor key to select the color and press 'ENTER'.

If Coordinates field is selected, press 'ENTER'. Use the cursor key to insert the value and press 'ENTER'.

Press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise).

4.2.5 GOTO

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

Press 'GO TO', select "CURSOR" and press 'GO TO' again or 'ENTER': a circle surrounds the Mark symbol. A line is shown, connecting the Target with the ship's position. When the Target is placed, all navigation data are referred to this Target.

Otherwise pressing 'GO TO', selecting "MARK" and pressing 'GO TO' again or 'ENTER', the User Points List is shown on the screen. Select the desired User Point (the Mark) and press 'GO TO' again or 'ENTER': the Target is placed on the selected User Point.

4.2.6 FINDING MARK

➤ Press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'FIND' + "USER POINTS" + 'ENTER'

A window is shown to find the Mark inserting label. Using the cursor to insert the name and press 'ACCEPT' ('CANCEL' otherwise).

4.2.7 FINDING INFORMATION ON MARKS: USER POINTS LIST

➤ Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

A full page window is shown with information on stored User Points (Mark e Waypoint). Moving cursor up/down select the desired User Point. See the previous Par. 4.1.2.8.

4.2.8 SEND MARKS

To transmit all User Points into the NMEA output port.

➤ Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

4.2.9 RECEIVE MARKS

To save all User Points received from the NMEA input port.

➤ Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

4.3 USING THE TRACK FUNCTIONS

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

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER'

4.3.1 ENABLING TRACK STORING

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "ACTIVATE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER' + "ACTIVATE" + 'ENTER'

To enable (On) the track storing. It is not possible to use the track storing if you are not receiving a valid fix.

To disable (Off) the track storing (if the track is enabled):

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "DEACTIVATE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER' + "DEACTIVATE" + 'ENTER'

4.3.2 DELETING TRACK

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "DELETE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER' + "DELETE" + 'ENTER'

Delete the all track or only a part. 'WHOLE', 'BEGIN' and 'END' allow to identify the begin and end points of the segment to be delete.

4.3.3 CONFIG MENU

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER'

4.3.3.1 Selecting Active Track

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "ACTIVE TRACK" + 'ENTER'

CHOICE FOR NAV-STATION 11:

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

Select the number of the active track. The default setting is 1.

4.3.3.2 Displaying Track

➤ Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISPLAY MODE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISPLAY MODE" + 'ENTER'

Select to display (VISIBLE) or not (HIDDEN) the track. The default setting is VISIBLE.

4.3.3.3 Selecting Track Color FOR COLOR CHART PLOTTER

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "COLOR" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "COLOR" + 'ENTER'

Select the desired color for the selected track. The default setting is BLACK.

4.3.3.4 Selecting Track memorizing type

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "STEP UNIT" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "STEP UNIT" + 'ENTER'

Select the DISTANCE (the chart plotter can store a fix when the distance from its last stored position is greater than a defined distance) or TIME (the chart plotter can store a fix after a defined time). The default setting is TIME.

4.3.3.5 Selecting Time

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "TIME" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "TIME" + 'ENTER'

When the tracking function is On and the type of track storing is Time, the chart plotter can store a fix after a defined time. It allows to choose among 1, 5, 10, 30 sec, 1, min. The default setting is 1 sec.

4.3.3.6 Selecting Distance

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISTANCE STEP" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "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. It allows to 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 Cap. 5). The default setting is 0.01 Nm.

4.3.3.7 Deleting All Tracks

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DELETE ALL TRACKS" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DELETE ALL TRACKS" + 'ENTER'

A warning window appears: press 'ENTER' or 'Yes' ('CLEAR' or 'No' otherwise).

4.3.4 DELETING TOTAL AND PARTIAL DISTANCE (LOG)

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "LOG" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "LOG" + 'ENTER'

It is possible to reset the total and partial distance that the ship has traveled from the begin of the navigation. Press 'TOTAL' to reset the total LOG or 'PARZ' to reset the partial LOG.

4.3.5 TRACK TO ROUTE CONVERSION

This function creates a Route from a pre-recorded Track. To select this menu:

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

A new window appears on the screen with the following options.

4.3.5.1 Track to Route

Executes the function that converts the given Track into a Route.

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

4.3.5.2 Advanced Menu

Allows setting the parameters used by the function Track To Route.

- Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "ADVANCED" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "ADVANCED" + 'ENTER'
 - **Select Track No.:** selects the Track input number.
 - **Select Route No.:** selects the Route output number.
 - **Off Course:** sets the conversion accuracy.
 - **Dist Waypoints:** sets the minimum distance between Waypoints.

4.4 MEMORY CARD MENU

The chart plotter 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.

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER'

4.4.1 SAVING FILE

- Press any soft key + 'CONFIG' + "MEMORY CARD" + 'ENTER' + 'SAVE'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'SAVE'

Select the data type to save pressing respectively 'MARK', 'EVENT', 'ROUTE' or 'TRACK'. A window is opened with a default name shown: use the cursor key to insert the desired name and press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise).

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.

4.4.2 LOADING FILE

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'LOAD'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'LOAD'

In the list choose the file name using the cursor key and press 'LOAD'.

4.4.3 DELETING FILE

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'DELETE'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'DELETE'

A warning window is shown, press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise). This operation remove old or unnecessary files to clean up your User C-CARD. Remember that this option permanently erases the file.

4.4.4 CARTRIDGE

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

4.4.4.1 Reading Directory on User C-CARD

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'READ'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'READ'

Appears the list of the files present on the User C-CARD inserted. During the reading, if it is going well, the message "READING DIR .. OK" appears in the frame in the right bottom corner.

4.4.4.2 Selecting slot FOR NAV-STATION 11

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SLOT'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SLOT'

When two User C-CARDS are insterted, it allows to select the slot containing the preferred User C-CARD. If no User C-CARD is present in the slot, a warning message is shown: press 'Ok' to continue.

4.4.4.3 Formatting User C-CARD

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'FORMAT'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'FORMAT'

A warning window is shown, press 'ENTER' or 'ACCEPT' ('CLEAR' or 'CANCEL' otherwise). The formatting of the User C-CARD must be done before using a new User C-CARD: this operation prepares the User C-CARD to receive and store information.

4.4.4.4 Sorting Directory

- Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SORT BY'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SORT BY'

Sort files in the directory. This is possible in the following modes:

- Press 'NAME' to sort using file name,
- Press 'TIME' to sort using the file creation time;
- Press 'TYPE' to sort using the file data.

5. Special Functions

5.1 C-WEATHER SERVICE

C-Weather Service is an innovative meteorological forecasting system with the ability to visualize the weather forecast, overlaying it on cartography. The weather data is held on C-MAP's weather server, which can be accessed via a C-COM modem connected to the chart plotter or by using the C-MAP personal Suite (or the DPS - Dealer Programming System) saving the weather data on a User C-CARD. The weather data are overlaid on a map page as layers. The Weather format data available are:








Data Type	Display
WIND (Speed & Dir)	- 0 ➡
WAVE (Height & Dir)	- 1 ➡
TEMPERATURE (C°)	18°
HUMIDITY (%)	30
VISIBILITY (m)	20
WEATHER TYPE: Sun	
WEATHER TYPE: Rain	
WEATHER TYPE: Fog	
WEATHER TYPE: Snow	
WEATHER TYPE: Clouds	
WEATHER TYPE: Partly Cloudy	
WEATHER TYPE: Thunderstorm	

Fig. 5.1 - Weather data package

WARNING

Please check with Local C-MAP Office for the actual C-WEATHER coverage of your area.

5.1.1 C-WEATHER SERVICE MENU

To select the menu:

- Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "C-WEATHER" + 'ENTER'

The C-Weather menu is shown on the screen, the items are described in the following paragraphs.

5.1.1.1 Load From File

- Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "LOAD FROM FILE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "C-WEATHER" + 'ENTER' + "LOAD FROM FILE" + 'ENTER'

Allows the C-WEATHER data loading from the User-CARD.

5.1.1.2 Download

- Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "DOWNLOAD" + 'ENTER'
CHOICE FOR NAV-STATION 11:
➤ 'SERVICE' + "C-WEATHER" + 'ENTER' + "DOWNLOAD" + 'ENTER'

Allows to connect the software to the C-MAP weather server and to download C-MAP weather data directly via C-COM.

Select Country to Call

Allows the selection of the country to call. The whole telephone number set is automatically updated after every download.

Telephone number

Shows the telephone number to get through to the server.

SIM PIN

Allows inserting of the PIN relating of the SIM.

Download Area

Allows the weather download: a squared grey area, where the weather data will be downloaded, is centered on cursor position.

Area of coverage of downloaded data is located by default with its centre on the cursor position

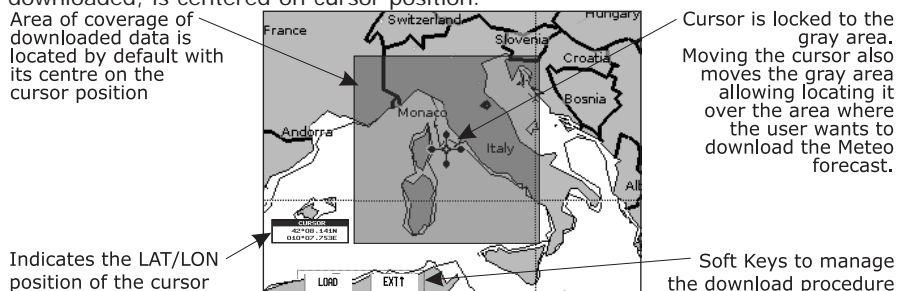


Fig. 5.1.1.2 - Area di Copertura meteorologica

Press 'LOAD' to activate the C-Weather Download: the whole data package (see the previous "Weather data package" table) are downloaded. 'Stop' allows to interrupt the data download. At the end of the operation press 'EXIT' to close the window.

5.1.1.3 Weather Forecast

- Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "FORECAST" + 'ENTER'
CHOICE FOR NAV-STATION 11:
➤ 'SERVICE' + "C-WEATHER" + 'ENTER' + "FORECAST" + 'ENTER'

Allows selecting the Layer of specific weather data to be displayed on the screen and to change date and time of the forecast preview.

The following functions are available:

- **Panning:** Default usage of the cursor key is the normal panning function.
- **Zoom In/Out:** allowed as usual by using 'ZOOM IN'/'ZOOM OUT'.
- **Set type of data:** 'TYPE' to choose data among: Wind, Wave Data, Wheater, Humidity, Temperature, Visibility.
 - **Set Date and Time:** 'DATE/TIME' to choose date and time among the pre-set one by the server.
 - **Exit:** 'EXIT' to close the weather prediction page.

5.1.1.4 Real Time View

- Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "REAL TIME VIEW" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "C-WEATHER" + 'ENTER' + "REAL TIME VIEW" + 'ENTER'

The following selections are available:

- **Real Time View On:** The data is shown (the area of the download) at the current date and time (received from the GPS)

- **Real Time View Off:** The Weather data is not displayed.

The layer displayed is the one selected into the previous menu item.

5.1.1.5 Type of Data

➤ Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "TYPE OF DATA" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "C-WEATHER" + 'ENTER' + "TYPE OF DATA" + 'ENTER'

Allows selecting the type of data among: Wind, Wave Data, Wheater, Humidity, Temperature, Visibility. See the previous Fig. 5.1.

5.2 AIS MENU

AIS is an Automatic Identification System. It has been introduced to improve the safety of navigation by assisting in the efficient operation of ship-to ship, ship reporting and VTS applications. The system should enable operators to obtain information from the ship automatically, requiring a minimum of involvement of ship's personnel, and should have a high level of availability. AIS transponders installed on IMO vessels use VHF frequencies to:

- Transmit details of their own vessel
- Receive details from other vessels or navigation aids within VHF range.

Information being transmitted from vessels over 300 tons that, due to recent worldwide legislation, are required to fit Class "A" AIS transponders.

Connecting to the chart plotter an AIS receiver (please contact your local dealer), vessels with AIS transponder within VHF range are displayed on screen giving the skipper or navigator a visual interpretation of the data of nearby vessels. This improves safety, and specifically for collision avoidance reasons.

5.2.1 AIS SYSTEM DEFINITIONS

Target	= It is a vessel equipped with AIS. Information about the targets is being received by AIS Receiver and displayed on the screen.
CPA	= Closest Point of Approach is the closest distance that will be achieved between your vessel and the tracked target, based on your vessel's speed and direction and the target's speed and direction.
CPA Limit	= This is the distance from your vessel that a target may reach before a target is deemed a threat.
CPA Alarm	= Occurs if CPA is less or equal to CPA Limit. This test is done for active targets only.
TCPA	= Time to closest Point of Approach is the time remaining until the CPA will occur.
TCPA Limit	= This is the time remaining before the CPA is reached.
TCPA Alarm	= Occurs if TCPA is less or equal to TCPA Limit. This test is done for active targets only and if CPA value is less or equal to CPA Limit.

Radio Call Sign	= International call sign assigned to vessel, often used on voice radio.
Name	= Name of ship, 20 characters.
MMSI	= Maritime Mobile Service Identity.
MMSI number	= A unique 9 digit number that is assigned to a DSC radio station. It primarily registers the boat information in the U.S. Coast Guard's national distress database for use in emergency situations.
Active Target	= Target located within the Activation Range. Active target is represented by oriented triangle with COG and Heading vectors. Rate of turn may also be displayed.
Dangerous Target	= Target detected by CPA or TCPA Alarm. Dangerous target is Active Target by definition. For better visibility Dangerous Target symbol is flashing.
Sleeping Target	= Target located outside the Activation Range. Sleeping target is represented by a small oriented triangle.
Lost Target	= When the AIS info is not received from that vessel for 3.5 minutes. The presentation will be a flashing black triangle with a cross through.
Activation Range	= Range around your boat where targets become active. AIS target become active within this range. Activation Range should be greater than CPA Limit by definition.

Note

*A target is removed from the screen if data is not received for 10 minutes.
The maximum number of tracked targets is 100.
Depending on the scale the presentation of the targets change to remove clutter on the screen.
This information is updated every 3 seconds to 6 minutes depending on speed and rate of turn, enabling the track of the vessels in range to be plotted.*





TARGET STATUS	DESCRIPTION	SYMBOL
ACTIVE TARGET	Target located within the Activation Range.	
DANGEROUS TARGET	Target detected by CPA or TCPA Alarm. Dangerous Target is Active Target by definition.	 Flashing
SLEEPING TARGET	Target located outside the Activation Range.	
LOST TARGET	Ais info is not received from that vessel for 3.5 minutes.	

Fig. 5.2.1 - AIS Symbols

5.2.2 AIS MENU

- To configure the chart plotter to receive AIS data, follow the procedure:
- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER'

The AIS menu is shown on the screen, the items are described in the following paragraphs.

5.2.2.1 Display

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "DISPLAY" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "DISPLAY" + 'ENTER'

Turns the display of AIS targets overlay on the cartography ON or OFF. The default setting is ON.

5.2.2.2 Activation Range

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "ACTIVATION RANGE" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "ACTIVATION RANGE" + 'ENTER'

Defines the range from the fix within which the AIS Target becomes active. The values allowed are from 0.1 to 50 Nm. The default setting is 5 Nm.

5.2.2.3 CPA Alarm

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "CPA ALARM" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "CPA ALARM" + 'ENTER'

Turns ON or OFF the alarm. The default setting is OFF.

5.2.2.4 CPA Limit

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "CPA LIMIT" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "CPA LIMIT" + 'ENTER'

The values allowed are from 0.1 to 10 Nm. The default setting is 0.5 Nm.

5.2.2.5 TCPA Alarm

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "TCPA ALARM" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "TCPA ALARM" + 'ENTER'

Turns ON or OFF the alarm. The default setting is OFF.

5.2.2.6 TCPA Limit

- Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "TCPA LIMIT" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "DEVICES" + 'ENTER' + "AIS SETUP" + 'ENTER' + "TCPA LIMIT" + 'ENTER'

The values allowed are from 1 to 30 min. The default setting is 10 min.

5.2.3 TO SET THE PLOTTER FOR RECEIVING AIS

Make sure that the AIS receiver is properly connected to the chart plotter. The chart plotter reads the AIS NMEA message VMD, type 1, 2, 3 and 5.

Select the used serial port and transmission speed by following the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3 Input" (NAV-STATION 11: "Port 1/2/3/4/5 Input") + 'ENTER' + "m" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "Port 1/2/3/4/5 Input" + 'ENTER' + "m" + 'ENTER'

Where: m = NMEA-0183 4800-N81-N or AIS 38400 according to the transmission speed of your AIS receiver.

5.2.4 QUICK INFO ON AIS TARGET

By placing the cursor over a AIS target icon, this information is displayed:

- **Vessel Name**
- **MMSI number**
- **Radio Call Sign**
- **SOG**
- **COG**
- **CPA and TCPA values**

Note

The selected AIS target icon is surrounded by a square frame when user places the cursor over the icon.

5.3 C-LINK

C-Link system is a feature which allows to sharing the same cartographic data between two chart plotter units (CP) linked via serial I/O port.

In order to activate C-Link function, a “MAX data C-CARD” (called REGULAR C-CARD) must be inserted into one of the two chart plotters and a special MAX data C-CARD (called MIRROR C-CARD) must be inserted on the other chart plotter. The two MAX data C-CARDS must have the same code and revision. So, the MIRROR C-CARD can be utilized only on a chart plotter linked to another chart plotter provided with the equivalent REGULAR C-CARD.

It is important to point out that the two chart plotters must have the update s/w versions that allow C-Link function.

5.3.1 HOW C-LINK SYSTEM WORKS

When the CP is powered up, it switches into the “Stand-Alone Mode”. In this work mode, the CP unit periodically scans all the available C-CARD slots searching for MIRROR C-CARDS. When one or more MIRROR C-CARD is found (in one or both CPs) a special connection is established between the CPs to habilitate the MIRROR C-CARDS. If a regular C-CARD which has previously activated a MIRROR C-CARD is removed, even the MIRROR card will be not read anymore on the other unit.

5.3.2 C-LINK SERIAL CONNECTION

The two chart plotters should be connected via serial ports. Any of the available ports can be used, the software will recognize automatically the serial ports used. A typical connection is as follows:

CP1		CP2
TX	—————>	RX
RX	<—————	TX
GND	<————>	GND

5.3.3 C-LINK NAVIGATION DATA TRANSFER

This function allows transferring C-Link navigation data (Route Name, Destination ID & Position, Next Waypoint ID & Position, Total Route length, Fuel Consumption Rate, ETA, TTG etc.) (Hereinafter “c-link navigation data”) between two chart plotters linked through the C-Link system. The chart plotters can be set to operate in two modes:

- MASTER mode (Primary Chart Plotter that sends data)
- SLAVE mode (Secondary Chart Plotter that receives data)

When the navigation is activated on the Master chart plotter, the C-Link navigation data will be continuously sent to the Slave until the navigation is active. If the Master is navigating to a Single Destination, the Slave will show the Destination position and activate the navigation to it. If the Master is navigating to a Route, the Slave will show the Route Leg composed by the Destination and the Waypoint after the Destination (Next Waypoint) and activate the navigation to it. Any variation to the current C-Link navigation data will be transferred from the Master to the Slave. The Slave will be provided with a few dedicated pages to show the C-Link navigation data received from the Master.

5.3.4 OPERATIONS

It is important remark, once more, that this function does not transfer the whole route but just the information relative to the navigation. Such information will be removed from the Slave Chart Plotter as soon as the navigation is terminated. C-Link navigation data is exchanged by using two NMEA-0183 C-MAP proprietary sentences: \$PCMPN,1 and \$PCMPN,2.

When the navigation is activated on the Master, it starts outputting the C-Link navigation data. If the Slave is connected, all c-link navigation data received are stored in its memory and the navigation is started.

The information sent by the Master consists of the following values:

- Navigation mode (To Single Destination / to a Route)
- Route Name (*)
- Destination ID
- Destination Position
- Next Waypoint ID (*)
- Range from Destination to next Waypoint (*)
- Bearing from Destination to next Waypoint (*)
- Route Length (*)
- Distance from Destination to Last Route Waypoint (*)
- Remaining Route Legs (*)
- Planned Cruising Speed
- Average Fuel Consumption
- Initial Fuel Load

C-Link navigation data can refer to:

- Single Destination navigation
- Route Following navigation.

Values identified by (*) are sent only for Route Following navigation.

The Destination Icon, Navigation leg (Fix Position to Destination), the Next Waypoint Icon and all other relevant c-link navigation data will be shown on the Slave chart plotter. Any variation of the C-link navigation data on the Master will be communicated to the Slave so to keep data aligned on both devices.

5.3.4.1 Master Chart Plotter

Operating mode

To select the Master mode (Primary Station) follow the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER' + "Primary Station" + 'ENTER'
- CHOICE FOR NAV-STATION 11:
- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER' + "Primary Station" + 'ENTER'

Master mode is the default factory setting. All regular chart plotters' functions are allowed. As soon as the Destination is placed, the master chart plotter will start transmitting all c-link navigation data. In Master mode the C-Link navigation data received from the NMEA port is ignored. So, if the two chart plotters are both operating in Master mode, the C-Link navigation data sent by the other Chart Plotter never processed. Under such condition if the navigation is activated on one of the two Chart Plotters, a warning message will be shown to notify that the C-Link navigation data will be ignored by the other Chart Plotter.

5.3.4.2 Slave Chart Plotter

Operating mode

To select the Slave mode (Secondary Station) follow the procedure:

- Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER' + "Secondary Station" + 'ENTER'

CHOICE FOR NAV-STATION 11:

- 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER' + "Secondary Station" + 'ENTER'

When Slave mode is set, the chart plotter cannot manipulate the C-link navigation data anymore.

Stop current navigation

If the navigation was already active, it will be disabled as soon as Slave mode is set. An appropriate warning message will be shown to notify that the Navigation is already active and to confirm whether Slave mode can be set.

Inhibit Navigation operation

As soon as Slave mode is set, the destination cannot be placed anymore either the C-link navigation data is received from the Master or not. Also, when the C-link navigation data is received from the Master, it will not be allowed to deactivate the Navigation.

Inhibit Route following

While navigating to the route received from the Master the destination is reached (either applying distance or perpendicular criteria), the destination will not be moved to the next Waypoint on the route.

MOB handling

If the Navigation to the external destination is active and the MOB key is pressed on the Slave Chart Plotter, the MOB is placed but the navigation to the MOB is not activated.

Notes

While navigating to the external destination the Operating Mode is switched to Master mode, the navigation to the external destination will be terminated. An appropriate warning message will be shown to notify that the Navigation to the external destination is active and to confirm whether Slave mode can be set. Setting Slave mode, the C-Link navigation data will be deleted. The C-Link navigation data are deleted at Power Off.

5.3.4.3 C-Link navigation data: Acquisition and Display

As soon as the C-Link navigation data is received, the Slave parses the information received and executes the relative actions depending on its current working status.

Note

When the Navigation to the external Destination is activated, the Slave Chart Plotter will show all relevant c-link navigation data exactly like when the destination is not the external

one: (Destination Name, DST and BRG to Destination, calculate XTE, calculate TTG etc). These values will be displayed all places where required and they will be used to format NMEA-0183 output data.




DESCRIPTION	SYMBOL
External Destination - RED Icon	
Next Waypoint - GREEN Icon	
Navigation Leg - RED Line	

Fig. 5.3.4.3 - Graphical Displaying

5.3.4.4 Route Data Report

When the Navigation to the External Route is received, it will be possible to display the information related to the External Route by entering the Route Data Report.

External Route	: Name of the External Route (from PCMPN,0)
Cruising Speed	: Planned Cruising Speed (from PCMPN,1)
Fuel Consumption Rate	: Planned Fuel Consumption Rate (from PCMPN,1)
Total Route length Route	: Length from First to Last Wpt. (from PCMPN,1)
Initial Fuel Load	: Volume of Fuel available before the navigation was started (Liters)
Total Fuel Consumption	: Calculated Fuel consumption to navigate the whole route.
Waypoints in Route	: No. of Wpts in the Route (from PCMPN,1)
Remaining Waypoints	: No. of Wpts from Dest to Last Wpt (from PCMPN,1)
Distance to Destination	: Distance from Ship to Destination (Calculated)
Distance to Next Wpt	: Distance to travel from ship to the Wpt after the Destination (calculated: Distance to Dest + Next Route Leg length)
Distance to Last Wpt	: Distance to travel from ship to the End of the Route (Calculated: Distance to Dest +Distance From Dest to last Wpt received from PCMPN,1)
TTG To Destination	: Estimated Time to travel the "Distance to Last Wpt". Calculated using Cruising Speed.
TTG To Next Wpt	: Estimated Time to travel the "Distance to Next Waypoint" Calculated using Cruising Speed.
TTG to Last Wpt	: Estimated Time to travel the "Distance to Last Wpt". Calculated using Cruising Speed
ETA to Destination	: Estimate Time of Arrival to the Destination Point. Calculated: Current Time + "TTG To Destination"
ETA to Next Waypoint	: Estimate Time of Arrival to the Waypoint after the Destination. Calculated: Current Time + "TTG To Next Waypoint"
ETA to Last Wpt	: Estimate Time of Arrival to the End of the Route. Calculated: Current Time + "TTG To Last Wpt"

5.3.4.5 Quick Info

Route Navigation: Quick Info on the Destination

EXTERNAL Rte [ROUTE001]			Route Name, DESTINATION ID Wpt1/4		
	DST	TTG	Cons		
	(nm)	(hh:mm)	Lit		
Dest	11.93	00:57	7.41		
Last	83.12	05:41	54.4		
Route Length:	71.19 Nm				

Fig. 5.3.4.5 - Quick Info on Destination

Quick info on Single Destination

EXTERNAL DESTINATION WPT002	
DST 7.41 Nm	BRG 082° M

Fig. 5.3.4.5a - Quick Info on Single Destination

5.4 DSC

The DSC (*Digital Selective Calling*) is a method of establishing a VHF radio call; it is used to announce urgent maritime safety information broadcasts. This system allows mariners to instantly send Distress Call or/and Position Request to the other vessels equipped with a DSC transceiver within range of the transmission. The Distress Call, that allows to receive a position of the vessel in distress, and the Position Request, a great feature for anyone wanting to know the location of another vessel - for example you buddy that is catching fish, or finding the location of a person you are cruising with, are performed by an external device, the DSC VHF radio. The chart plotter interfaced with a DSC VHF radio prompts the user to see the GPS position of the vessel in distress and also allows for easy navigation to the vessel. The Distress Call and the Position Request icons that are displaying on the screen, are shown in the following table:

DESCRIPTION	SYMBOL
Position Request icon	
Distress Call icon	

Fig. 5.4 - Distress Call and Position Request icons

Note
The label can be the MMSI or the corresponding vessel's name. If in the DSC Directory the MMSI has been associated to its relative vessel name, the vessel's name is shown in the label instead of the MMSI.

5.4.1 DISTRESS CALL AND POSITION REQUEST

In During a distress situation, a vessel that is equipped with a DSC VHF radio and connected to a GPS, has the capability to transmit a DSC Distress Call with GPS Position.

When the VHF radio receives a DSC Distress Call, the position information of

Go To Vessel	: Activates the navigation to the Distress Call or Position Request icon. The chart plotter changes the map scale to allow showing the Distress Call (or Position Request) icon and the vessel's icon simultaneously on the screen. The chart plotter then verifies if there are obstructions (land or low water) between the two positions. If obstructions are found the chart plotter shows a pop-up screen saying that the navigation to the Distress Call cannot be set automatically and the user must define a route to avoid the obstacles.
Stay on View	: Exits the pop-up screen and remains on the selected map screen.

Clr-All

Deletes all entries.

Hide/Show

Allows hiding/showing the selected DSC position on the chart display.

Distress Call/Position Request

Shows Position Request/Distress Call page. When Position Request page is active this message changes to Distress Call.

5.4.2.2 Directory

➤ Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "DI-RECTORY" + 'ENTER'

CHOICE FOR NAV-STATION 11:

➤ 'SERVICE' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "DIRECTORY" + 'ENTER'

Selects the DSC Directory page. From this page the user can assign the Vessel Name, Contact Name and Phone number to any MMSI (*Maritime Mobile Service Identity*) so that, when a DSC Distress Call or Position Request is received, the name of the vessel is displayed in place of the MMSI number - a unique number that is assigned to a DSC radio station for use in emergency situations:

DSC DIRECTORY			
VESSEL NAME	MMSI	CONTACT	PHONE
SCORPION	0046712433	ERICH SMITH	12372133456
STRIKE 99	0036612458	JIMMY PAGE	22832178345
JUPITER	0036612459	ROBERT PIO	22114433001
SARA	0063412123	SUSANNE	44332211001
EDIT	ADD	DELETE	DELETE ALL

Fig. 5.4.2.2 - Example of DSC Directory page

Edit

Edit the fields of any existing entry in the Directory: Vessel Name, MMSI number, contact and phone number.

Add

Add a new entry to the Directory.

Delete

Delete the selected entry.

Delete All

Deletes all entries in the page.

5.4.3 QUICK INFO ON DSC ICONS

Placing the cursor on the Distress Call or Position Request icon, the following information is displayed:

- **Vessel Name/MMSI Number**
- **Position**
- **Date and Time**
- **Distance and Bearing from current vessel position**

Pressing 'ENTER' it is possible, by selecting "DELETE" deletes the DSC icon from the DSC Log page, otherwise by selecting "DSC LOG" the DSC Log page is shown.

5.5 FISH FINDER MENU

The chart plotter combined with the sonar performance of the Fish Finder is one of the most advanced marine navigation system available. To select the Fish Finder menu, first select one of the four page related to the Fish Finder:

- **'PAGE' + "FISH FINDER 200/50 kHz " + 'ENTER' + 'CLEAR'**

Then to select the Fish Finder menu:

- **Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'**

CHOICE FOR NAV-STATION 11:

- **'SERVICE' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'**

For more information see the specific User Manual.

Note

The Fish Finder display page is available only if the Fish Finder is connected and powered On.

5.6 RADAR MENU (FOR NAV-STATION 11)

The Radar consists of a scanner unit which illuminates targets with micro-wave energy and then collects the echoes from those targets. The scanner unit includes the Radar antenna, transmitter, receiver and necessary electronics. The scanner unit is connected to a chart plotter equipped with software capable of displaying the Radar functions.

To select the Radar menu, first select one of the page related to the Radar:

- **'PAGE' + "RADAR" + 'ENTER' + 'CLEAR'**
- **Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'**

CHOICE FOR NAV-STATION 11:

- **'SERVICE' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'**

For more information see the specific User Manual.

Note

The Radar display page is available only if the Fish Finder is connected and powered On.

6. Terms & Functions

This section explains the terms that may be unfamiliar to the reader. The symbol ■ indicates that the term is followed only by an explanation, while the symbol ► indicates that the term is more widely explained; you will also find a briefly description on how to select the related menu option, listing the operation a keys sequence with the menu names enclosed between double apices. For example 'SERVICE' + "SETUP" + 'ENTER' + "Bearing" + 'ENTER' means that you must press the 'SERVICE' key, using the cursor key to select the Setup menu and press the 'ENTER' key to access it; then use the cursor key to select the "Bearing" item and then press the 'ENTER' key to select "True" or "Auto Mag."

► AIS

AIS is an Automatic Identification System. It has been introduced to improve the safety of navigation by assisting in the efficient operation of ship-to ship, ship reporting and VTS applications.

... Display (On, Off)

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "DISPLAY" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "DISPLAY" + 'ENTER'

... Activation Range

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "ACTIVATION RANGE" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "ACTIVATION RANGE" + 'ENTER'

... CPA Alarm (On, Off)

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "CPA ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "CPA ALARM" + 'ENTER'

... CPA Limit

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "CPA LIMIT" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "CPA LIMIT" + 'ENTER'

... TCPA Alarm (On, Off)

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "TCPA ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "TCPA ALARM" + 'ENTER'

... TCPA Limit

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "TCPA LIMIT" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER' + "TCPA LIMIT" + 'ENTER'

► ALARMS (menu)

Sets the desired values/settings for the alarms.

... Auto Off (On, Off)

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "AUTO OFF" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "AUTO OFF" + 'ENTER'

... Arrival Alarm

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "ARRIVAL ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "ARRIVAL ALARM" + 'ENTER'

... XTE Alarm

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "XTE ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "XTE ALARM" + 'ENTER'

... Anchor Alarm

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "ANCHOR ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "ANCHOR ALARM" + 'ENTER'

... Depth Alarm

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "DEPTH ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "DEPTH ALARM" + 'ENTER'

... Heading Alarm (On, Off)

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "HEADING ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "HEADING ALARM" + 'ENTER'

... **Grounding Alarm** (On, Off)

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "GROUNDING ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "GROUNDING ALARM" + 'ENTER'

... **Grounding Depth Limit**

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "GROUNDING DEPTH LIMIT" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "GROUNDING DEPTH LIMIT" + 'ENTER'

... **Grounding Alarm Range** (0.25 Nm, 0.5 Nm, 1.0 Nm)

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "GROUNDING ALARM RANGE" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "GROUNDING ALARM RANGE" + 'ENTER'

... **Grounding Alarm Report**

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "GROUNDING ALARM REPORT" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "GROUNDING ALARM REPORT" + 'ENTER'

... **External Alarm** (On, Off)

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER' + "EXTERNAL ALARM" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER' + "EXTERNAL ALARM" + 'ENTER'

➤ **AUTO INFO**

The type of Automatic Info is user selectable. 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 and areas).

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "AUTO INFO" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER' + "AUTO INFO" + 'ENTER'

■ **AZIMUTH**

The angular measurement from the horizon to a satellite or another object.

■ **BEACON**

A prominent, specially constructed object forming a conspicuous vertical mark as a fixed aid to navigation.

■ **BRG = Bearing**

It is the angle between the North (True or Magnetic) and a destination. It represents the direction to follow.

■ **BUOY**

A floating object moored to the sea bottom in a particular (charted) place, as an aid to navigation.

➤ **CARTRIDGE (menu)**

Before a new user C-CARD can be used, you must format it. The formatting function initializes the user C-CARD and prepares it for storing information. Remember that if an user C-CARD is not blank, formatting it will destroy any data already present on the user C-CARD (the user C-CARDS must be formatted in order to be reused, this operation means all old data memorized on the user C-CARD will be lost).

... **Read**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'READ'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'READ'

... **Slot** (FOR NAV-STATION 11)

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SLOT'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SLOT'

... **Format**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'FORMAT'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'FORMAT'

... **Sort By**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SORT BY'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.' + 'SORT BY'

■ **C-CARD**

A chart cartridge, called C-CARD, contains detailed charts of the area covered.

➤ **CHART (page)**

Shows the chart and the Text Area (if selected).

'PAGE' + "CHART" + 'ENTER'

■ **C-LINK**

C-Link system is a feature which allows to sharing the same cartographic data between two chart plotter units (CP) linked via serial I/O port.

■ **COG = Course Over Ground**

Direction of the path over ground actually followed by a vessel.

➤ **CONFIG Track (menu)**

Handles track settings.

... Active Track

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "ACTIVE TRACK" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "ACTIVE TRACK" + 'ENTER'

... Display Mode (Visible/Hidden)

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISPLAY MODE" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISPLAY MODE" + 'ENTER'

... Color (FOR COLOR CHART PLOTTER)

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "COLOR" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "COLOR" + 'ENTER'

... Step Unit (Time/Distance)

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "STEP UNIT" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "STEP UNIT" + 'ENTER'

... Time Step (1 sec, 5 sec, 10 sec, 30 sec, 1 Min, 5 Min, 10 Min)

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "TIME STEP" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "TIME STEP" + 'ENTER'

... Distance Step (0.01, 0.05, 0.1, 0.5, 1.0, 2.0, 5.0, 10.0)

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISTANCE STEP" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DISTANCE STEP" + 'ENTER'

... Delete All Tracks

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DELETE ALL TRACKS" + 'ENTER'
CHOICE FOR NAV-STATION 11:"TRACK" + 'ENTER' + "CONFIG" + 'ENTER' + "DELETE ALL TRACKS" + 'ENTER'

■ CURRENT

Non-periodical movement of sea-water, generally horizontal, due to many causes such as different temperatures and prevalent winds. Some may be temporary, others permanent.

➤ C-WEATHER

C-Weather Service is an innovative meteorological forecasting system with the ability to visualize the weather forecast, overlaying it on cartography.

... Load From File

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "LOAD FROM FILE" + 'ENTER'
CHOICE FOR NAV-STATION 11:"SERVICE" + "C-WEATHER" + 'ENTER' + "LOAD FROM FILE" + 'ENTER'

... Download (Select Country To Call, Telephone Number, Pin Sim, Download Area)

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "DOWNLOAD" + 'ENTER'
CHOICE FOR NAV-STATION 11:"SERVICE" + "C-WEATHER" + 'ENTER' + "DOWNLOAD" + 'ENTER'

... Forecast

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "FORECAST" + 'ENTER'
CHOICE FOR NAV-STATION 11:"SERVICE" + "C-WEATHER" + 'ENTER' + "FORECAST" + 'ENTER'

... Real Time View (On, Off)

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "REAL TIME VIEW" + 'ENTER'
CHOICE FOR NAV-STATION 11:"SERVICE" + "C-WEATHER" + 'ENTER' + "REAL TIME VIEW" + 'ENTER'

... Type of Data (Wind, Wave Data, Weather, Humidity, Temperature, Visibility)

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER' + "TYPE OF DATA" + 'ENTER'
CHOICE FOR NAV-STATION 11:"SERVICE" + "C-WEATHER" + 'ENTER' + "TYPE OF DATA" + 'ENTER'

➤ DATA (page)

Allows to select the number of lines (max 4) and the values that are shown in the Text Area.

Press any soft key + 'DATA'

CHOICE FOR NAV-STATION 11:"DATA"

■ DATUM

The Latitude and Longitude lines printed on any map are based on certain models of the shape of the earth: these models are called Datum or Coordinate Systems. There are many different Datum in use, each one gives different Lat/Lon positions for an identical point on the surface of the earth.

■ Dedicated Key

Key with a specified function. These keys have a label printed on them.

■ DEFAULT

Indicates a value or a setting which is used if the user has not defined a particular value. You can modify this value using the menu settings.

➤ DEPTH (page)

Allows to display the Depth Graph:

full screen: 'PAGE' + "DEPTH" + 'ENTER'

split screen: 'PAGE' + "CHART" + 'ENTER' + "DEPTH" + 'ENTER'

■ DEPTH RANGE

The sea area that is **beyond** the selected range is filled by an uniform white color, the sea area

that is **inside** the selected range is filled by ordinary multicolor shading. The Spot Soundings and Depth Contours are displayed on the range only.

➤ **DEVICES (menu)**

Allows to select the following menu:

... **FISH FINDER SETUP Menu**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'

... **RADAR SETUP Menu** (FOR NAV-STATION 11)

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'

... **AIS Menu**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "AIS" + 'ENTER'

... **DSC Menu**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER'

■ **DGPS = Differential GPS**

Provides even greater positioning accuracy than standard GPS.

➤ **DSC**

The DSC (*Digital Selective Calling*) is a method of establishing a VHF radio call; it is used to announce urgent maritime safety information broadcasts.

... **Log**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "LOG" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "LOG" + 'ENTER'

... **Directory**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "DIRECTORY" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "DSC" + 'ENTER' + "DI-RECTORY" + 'ENTER'

■ **DTG = Distance To Go**

The actual distance to reach the Target.

■ **EVENT**

User point that refers to the ship's position. It is simply a way of marking where the boat is.

■ **FILE**

It is a collection of information (of the same type) stored on a User C-CARD. Each file must have a unique name, ideally one that describes its contents. Filenames are kept in a directory on each User C-CARD.

➤ **FIND (menu)**

The chart plotter allows finding Port Services, Port By Name, Port By Distance, Lakes By Name, Lakes Information, Points Of Interest, Tide Stations, Wrecks, Obstructions, Coordinates and User Points.

... **Port Services**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT SERVICES" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "PORT SERVICES" + 'ENTER'

... **Port By Name**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT BY NAME" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "PORT BY NAME" + 'ENTER'

... **Port By Distance**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "PORT BY DISTANCE" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "PORT BY DISTANCE" + 'ENTER'

... **Tide Stations**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "TIDE STATIONS" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "TIDE STATIONS" + 'ENTER'

... **Wrecks**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "WRECKS" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "WRECKS" + 'ENTER'

... **Obstructions**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "OBSTRUCTIONS" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "OBSTRUCTIONS" + 'ENTER'

... **Cursor**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "CURSOR" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "CURSOR" + 'ENTER'

... **Lakes Info**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "LAKES INFO" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'FIND' + "LAKES INFO" + 'ENTER'

... **Lakes By Name**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "LAKES BY NAME" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'FIND' + "LAKES BY NAME" + 'ENTER'

... **Points Of Interest**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "POINTS OF INTEREST" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'FIND' + "POINTS OF INTEREST" + 'ENTER'

... **Coordinates**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "COORDINATES" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'FIND' + "COORDINATES" + 'ENTER'

... **User Points**

Press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'FIND' + "USER POINTS" + 'ENTER'

➤ **FISH FINDER SETUP (menu)**

The chart plotter combined with the sonar performance of the Fish Finder is one of the most advanced marine navigation system available. For more information see the specific User Manual.

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "FISH FINDER SETUP" + 'ENTER'

➤ **GOTO (menu)**

Allows to select the main navigation functions to a Target.

... **Last GoTo**

'GO TO' + "LAST GOTO" + 'ENTER' (or 'GOTO')

... **Cursor**

'GO TO' + "CURSOR" + 'ENTER' (or 'GOTO')

... **Mark**

'GO TO' + "MARK" + 'ENTER' (or 'GOTO')

... **Routes**

'GO TO' + "ROUTES" + 'ENTER' (or 'GOTO')

... **Port Services**

'GO TO' + "PORT SERVICES" + 'ENTER' (or 'GOTO')

... **Clear GOTO**

'GO TO' + "CLEAR GOTO" + 'ENTER' (or 'GOTO')

■ **GPS = Global Positioning System**

It is a satellite based navigation system operated by the US Department of Defense. It gives the navigator a position 24 hours a day, 365 days a year under any weather conditions.

➤ **GPS (page)**

The GPS data page shows in graphic mode GPS data.

Press any soft key + 'SETTING' + "GPS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "GPS" + 'ENTER'

➤ **GPS SETUP (menu)**

(FOR CHART PLOTTER WITH GPS RECEIVER)

It is possible to set the your preferred configuration for the connected GPS.

... **Restart GPS**

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "RESTART GPS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "RESTART GPS" + 'ENTER'

... **Differential Correction** (None, WAAS-EGNOS, RTCM-104)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "DIFF CORR" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "DIFF CORR" + 'ENTER'

... **Navigation Speed** (High, Low)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "NAVIGATION SPEED" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "NAVIGATION SPEED" + 'ENTER'

... **PRN WAAS SATELLITE Selection** (Auto, 120) (ACTIVE IF DIFFERENTIAL CORRECTION IS WAAS-EGNOS)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "PRN WAAS SATELLITE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "GPS SETUP" + 'ENTER' + "PRN WAAS SATELLITE" + 'ENTER'

■ **HDG = Heading**

The horizontal direction in which a ship actually points or heads in any moment (see also COG).

■ **HDOP = Horizontal Dilution Of Precision**

It is the index for position-fixing accuracy. The smaller the HDOP value, the more accurately the position can be fixed.

➤ **HIGHWAY 3D**

Allows to display the Navigation plane in prospective mode..

'PAGE' + "HIGHWAY 3D" + 'ENTER'

➤ **HOME (or Navigation)**

See Navigation mode.

'CLEAR'

► INPUT/OUTPUT (menu)

Allows to select the following options Port Input 1/2/3 (**NAV-STATION 11: Port Input 1/2/3/4/5**), Port Output 1/2/3 (**NAV-STATION 11: Port Output 1/2/3/4/5**), Port Output Sentences 1/2/3 (**NAV-STATION 11: Port Output Sentences 1/2/3/4/5**), C-Link, the VIDEO INPUT menu (**NAV-STATION 11 VCAM/PANORAMA**) and the Cable Wiring pages.

Warning

After every software upgrade the RAM is cleared and the chart plotter re starts with the usual default settings. Please go to the Input/output menu and set the proper input format once again.

... **Port 1/2/3/4*/5* Input** (NMEA-0183 1200-N-81-N, NMEA-0183 4800-N-81-N, NMEA-0183 4800-N-82-N, NMEA-0183 9600-N-81-N, NMEA-0183 9600-O-81-N, C-COM, BBFF 170, BBFF 50/200, RADAR, AIS 38400, Disabled)

Press any soft key + 'SETTING' + 'INPUT/OUTPUT' + 'ENTER' + "PORT 1/2/3 INPUT" (*FOR NAV-STATION 11 "PORT 1/2/3/4/5 INPUT") + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "PORT 1/2/3/4/5 INPUT") + 'ENTER'

... **Port 1/2/3/4*/5* Output** (NMEA-0183 4800-N-81-N, NMEA-0180, NMEA-0180/CDX, Disabled)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "PORT 1/2/3 OUTPUT" (*FOR NAV-STATION 11 "PORT 1/2/3/4/5 OUTPUT") + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "PORT 1/2/3/4/5 OUTPUT") + 'ENTER'

... **Port 1/2/3/4*/5* Output Sentences** (GLL, VTG, BOD, XTE, BWC, RMA, RMB, RMC, APB, WCV, GGA, HSC, HDG, MWV)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "PORT 1/2/3 OUTPUT SENTENCES" (*FOR NAV-STATION 11 "PORT 1/2/3/4/5 OUTPUT SENTENCES") + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "PORT 1/2/3/4/5 OUTPUT SENTENCES") + 'ENTER'

... **Internal GPS Setup Menu** (FOR CHART PLOTTER WITH INTERNAL GPS RECEIVER)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "INTERNAL GPS SETUP" + 'ENTER'

... **Video Input Menu** (FOR NAV-STATION 11 VCAM)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER'

... **C-LINK Menu**

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "C-LINK" + 'ENTER'

... **Cable Wiring** (FOR NAV-STATION 5)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "POWER & I/O CABLE WIRING" + 'ENTER'

... **Cable Wiring** (FOR NAV-STATION 6)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "POWER & I/O CABLE WIRING" + 'ENTER'

and/or

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "GPS CABLE WIRING" + 'ENTER'

... **Cable Wiring** (FOR NAV-STATION 11)

'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "CABLE WIRING" + 'ENTER'

... **External Signal** (FOR NAV-STATION 11)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "EXTERNAL SIGNAL" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "EXTERNAL SIGNAL" + 'ENTER'

■ LATITUDE

The angular distance North or South of the equator measured by lines encircling the earth parallel to the equator in degrees from 0° to 90°.

■ LAT/LON

Coordinate system using Latitude and Longitude coordinates to define a position on earth.

► LIST (User Points) (menu)

Displays the User Points list on the screen.

... **List**

Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

... **Send**

Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "SEND" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

... **Receive**

Press any soft key + 'SETTING' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

■ LONGITUDE

The angular distance East or West of the prime meridian (Greenwich meridian) as measured by lines perpendicular to the parallels and covering at the poles from 0° to 180°.

■ MAGNETIC DEVIATION

The angle between the Magnetic North and the Compass North.

■ MAGNETIC VARIATION

The angle between the magnetic and geographic meridians at any place, expressed in degrees West or East to indicate the direction of magnetic North from true North. It changes from point to point, and (at the same point) with time.

► MAP (menu)

One of the many advantages of the C-MAP cartography is the ability to select the information you want to display. The user may choose either to display or not on the screen the selected objects, depending on his specific requirement.

... *Zoom Type (Standard, Flexi-Zoom)*

Press any soft key + 'MAP' + "ZOOM TYPE" + 'ENTER'

... *Fonts & Symbols (Normal, Large)*

Press any soft key + 'MAP' + "FONTS & SYMBOLS" + 'ENTER'

... *Perspective View (On, Off)*

Press any soft key + 'MAP' + "PERSPECTIVE VIEW" + 'ENTER'

... *Dynamic Nav-Aids (On, Off)*

Press any soft key + 'MAP' + "DYNAMIC NAV-AIDS" + 'ENTER'

... *Mixing Levels (On, Off)*

Press any soft key + 'MAP' + "MIXING LEVELS" + 'ENTER'

... *Safety Status Bar (On, Off, Icon)*

Premere un qualsiasi soft key + 'CARTA' + "SAFETY STATUS BAR" + 'ENTER'

... *Currents Prediction*

Premere un qualsiasi soft key + 'CARTA' + "CURRENTS PREDICTION" + 'ENTER'

... *Other Map Configurations Menu*

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER'

... *Info*

Press any soft key + 'MAP' + "INFO" + 'ENTER'

... *Find Menu*

Press any soft key + 'MAP' + "FIND" + 'ENTER'

► MARK

Reference points related to cursor position

Add Mark: 'ENTER' + "MARK" + 'ENTER'

Move Mark: place cursor on Mark+ 'MOVE' + cursor + 'ENTER'

Delete Mark: place cursor on Mark+ 'DELETE' + 'ENTER'

Edit Mark: place cursor on Mark+ 'EDIT' + 'ENTER' + select field (*Symbol/Name/Color (FOR COLOR CHART PLOTTER)/Coordinates*) using cursor + 'ENTER'

GoTo on Mark: place cursor on Mark+ 'GoTo' + 'ENTER'

Find Mark: press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'FIND' + "USER POINTS" + 'ENTER'

Info on Mark: press any soft key + 'SETTING' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "LIST" + 'ENTER'

Send Mark: press any soft key + 'SETTING' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

Receive Mark: press any soft key + 'SETTING' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

► MEMORY CARD (menu)

The chart plotter uses the optional User C-CARD to save user data: it is a convenient medium to store and retrieve your information.

... *Save File (Mark, Event, Routes, Tracks)*

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'SAVE'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'SAVE'

... *Load File*

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'LOAD'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'LOAD'

... *Delete File*

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'DELETE'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'DELETE'

... *Cartidge Menu*

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

► MEMORY CARD (menu)

The chart plotter uses the optional User C-CARD to save user data: it is a convenient medium to

store and retrieve your information.

... **Save File** (*Mark, Event, Routes, Tracks*)

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'SAVE'

CHOICE FOR NAV-STATION 11:'SERVICE' + "MEMORY CARD" + 'ENTER' + 'SAVE'

... **Load File**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'LOAD'

CHOICE FOR NAV-STATION 11:'SERVICE' + "MEMORY CARD" + 'ENTER' + 'LOAD'

... **Delete File**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'DELETE'

CHOICE FOR NAV-STATION 11:'SERVICE' + "MEMORY CARD" + 'ENTER' + 'DELETE'

... **Cartidge Menu**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

CHOICE FOR NAV-STATION 11:'SERVICE' + "MEMORY CARD" + 'ENTER' + 'CARTR.'

➤ **MOB = Man OverBoard**

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

Inserting MOB: 'ENTER' + "MOB" + 'ENTER'

Deleting MOB: 'ENTER' + "MOB" + 'ENTER' + 'ACCEPT'

➤ **NAVIGATION (or Home)**

From charting, while receiving a fix position and the chart plotter is not in Navigation mode, enables the Navigation mode (also called Home).

When in Navigation mode, the cursor is not shown and all cartographic functions are related to the ship position. The received fix position is centered in the cartography area and the window screen follows the ship position as the position changes. When the cursor key has been pressing, the Navigation mode is disabled and the cursor symbol is shown again. Note that also the cursor symbol is not shown while Navigation mode is active, its coordinates are updated with ship position coordinates.

'CLEAR'

➤ **OTHER MAP CONFIGURATIONS (menu)**

Selects from a predefined table what cartographic objects are displayed and which display options are set.

... **Display Mode** (*Full, Medium, Low, Radar, Tide, Custom*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "DISPLAY MODE" + 'ENTER'

The following are the available selections only if **Custom** has been selected:

... **Place Names** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "PLACE NAMES" + 'ENTER'

... **Name Tags** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "NAME TAGS" + 'ENTER'

... **Nav-Aids & Light Sectors** (*On, Off, No Sector*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "NAV AIDS & LIGHT SECTORS" + 'ENTER'

... **Attention Areas** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "ATTENTION AREAS" + 'ENTER'

... **Tides & Currents** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "TIDES & CURRENTS" + 'ENTER'

... **Seabed Type** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "SEABED TYPE" + 'ENTER'

... **Ports & Services** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "PORTS & SERVICES" + 'ENTER'

... **Routes & Tracks** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "ROUTES & TRACKS" + 'ENTER'

... **User Points** (*On, Off, Icon*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "USER POINTS" + 'ENTER'

... **Depth Range Min**

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "DEPTH RANGE MIN" + 'ENTER'

... **Depth Range Max**

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "DEPTH RANGE MAX" + 'ENTER'

... **Land Elevation** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "LAND ELEVATION" + 'ENTER'

... **Land Elevation values** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "LAND ELEVATION VALUES" + 'ENTER'

... **Roads** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "ROADS" + 'ENTER'

... **Points Of Interest** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "POI" + 'ENTER'

... **Lat/Lon Grid** (*On, Off*)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "LAT/LON GRID" + 'ENTER'

... **Chart Boundaries** (On, Off, Auto)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "CHART BOUNDARIES" + 'ENTER'

... **Value-Added Data** (On, Off)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "VALUE-ADDED DATA" + 'ENTER'

... **Chart Lock** (On, Off)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "CHART LOCK" + 'ENTER'

... **Underwater Objects Limit**

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "UNDERWATER OBJECTS LIMIT" + 'ENTER'

... **Rocks** (Off, Icon, Icon + Depth)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "ROCKS" + 'ENTER'

... **Obstructions** (Off, Icon, Icon + Depth)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "OBSTRUCTIONS" + 'ENTER'

... **Diffusers** (Off, Icon, Icon + Depth)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "DIFFUSERS" + 'ENTER'

... **Wrecks** (Off, Icon, Icon + Depth)

Press any soft key + 'MAP' + "OTHER MAP CONFIGURATIONS" + 'ENTER' + "WRECKS" + 'ENTER'

■ ORIENTATION RESOLUTION

The Orientation Resolution is the resolution angle for the Map Orientation, range [5, 30] degrees. The default setting is 30°.

► PALETTE (FOR COLOR CHART PLOTTER)

It is possible to select Normal, NOAA, Night Vision or Sunlight for Palette. **Normal** is recommended when the chart plotter 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 original paper charts. **NOAA** allows setting NOAA paper chart colors presentation. **Sunlight** is designed to enhance the visibility of the screen when the chart plotter 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. **Night Vision** is recommended when the environment is dark in order to reduce the glare of the display. The chart plotter displays maps and screen in darker colors.

'POWER' + 'PAGE'

or:

Press soft key + 'CONFIG' + "LCD ADJUSTMENT" + 'ENTER' + 'PAGE'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LCD ADJUSTMENT" + 'ENTER' + 'PAGE'

■ PORT INFO

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

► RADAR SETUP (menu) (FOR NAV-STATION 11)

The Radar consists of a scanner unit which illuminates targets with microwave energy and then collects the echoes from those targets. The scanner unit includes the Radar antenna, transmitter, receiver and necessary electronics. The scanner unit is connected to a chart plotter equipped with software capable of displaying the Radar functions.

For more information see the specific User Manual.

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER' + "RADAR SETUP" + 'ENTER'

► ROUTE

Sequence of Waypoints connected by segments. Among the available routes, only one is the active route, which is shown by a straight line and arrows to indicate the direction. The first Waypoint of the active route is surrounded by a circle.

... **Select**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'SELECT'/'NOTE'/'COLOR'/'HIDE'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "SELECT" + 'ENTER' + 'SELECT'/'NOTE'/'COLOR'/'HIDE'

... **Delete**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "DELETE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "DELETE" + 'ENTER'

... **Report**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "REPORT" + 'ENTER'

... **Send**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "SEND" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "SEND" + 'ENTER'

... **Receive**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "RECEIVE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "RECEIVE" + 'ENTER'

... **Color** (FOR COLOR CHART PLOTTER)

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER' + "COLOR" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER' + "COLOR" + 'ENTER'

■ **RTCM = Radio Technical Commission for Maritime Services**

The data format created by the Radio Technical Commission Maritime to transmit [Differential](#) GPS corrections.

➤ **SETTING (menu)**

Allows to select the following menu:

... **SETUP Menu**

Press any soft key + 'SETTING' + "SETUP" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER'

... **Input/Output Menu**

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER'

... **GPS page**

Press any soft key + 'SETTING' + "GPS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "GPS" + 'ENTER'

... **C-WEATHER Menu**

Press any soft key + 'SETTING' + "C-WEATHER" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "C-WEATHER" + 'ENTER'

... **DEVICES Menu**

Press any soft key + 'SETTING' + "DEVICES" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "DEVICES" + 'ENTER'

... **Memory Card Menu**

Press any soft key + 'SETTING' + "MEMORY CARD" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "MEMORY CARD" + 'ENTER'

... **List Menu**

Press any soft key + 'SETTING' + "LIST" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER'

... **Track Menu**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER'

... **Route Menu**

Press any soft key + 'SETTING' + "ROUTE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ROUTE" + 'ENTER'

... **Alarms Menu**

Press any soft key + 'SETTING' + "ALARMS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ALARMS" + 'ENTER'

... **Simulation Menu**

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SIMULATION" + 'ENTER'

... **LCD Adjustment**

Press any soft key + 'SETTING' + "LCD ADJUSTMENT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LCD ADJUSTMENT" + 'ENTER'

... **Shut Down** (FOR NAV-STATION 6)

Press any soft key + 'SETTING' + "SHUT DOWN" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SHUT DOWN" + 'ENTER'

... **About page**

Press any soft key + 'SETTING' + "ABOUT..." + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "ABOUT..." + 'ENTER'

➤ **SETUP (menu)**

Allows to select the following menu:

... **Language**

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "LANGUAGE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER' + "LANGUAGE" + 'ENTER'

... **Dist & Speed Units** (Nm & Kts, Sm & Mph, Km & Kmh)

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "DIST & SPEED UNITS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER' + "DIST & SPEED UNITS" + 'ENTER'

... **Depth Unit** (Ft = Feet, FM = Fathoms, Mt = Meter)

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "DEPTH UNITS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER' + "DEPTH UNITS" + 'ENTER'

... **Altitude Unit** (Ft = Feet, FL = Flight Level, Mt = Meter)

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "ALTITUDE UNITS" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "SETUP" + 'ENTER' + "ALTITUDE UNITS" + 'ENTER'

... **Temperature Unit** (°C, °F)

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "TEMPERATURE UNITS" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "TEMPERATURE UNITS" + 'ENTER'

... *Time Reference (UTC, Local time)*

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "TIME REFERENCE" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "TIME REFERENCE" + 'ENTER'

... *Bearing (Auto Mag, True)*

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "BEARING" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "BEARING" + 'ENTER'

... *Map Orientation (North Up, Head Up, Track Up)*

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "MAP ORIENTATION" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "MAP ORIENTATION" + 'ENTER'

... *Nav-Aids Presentation (International, US)*

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "NAV-AIDS PRESENTATION" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "NAV-AIDS PRESENTATION" + 'ENTER'

... *Auto Info (Off, On Points, On All)*

Press any soft key + 'SETTING' + "SETUP" + 'ENTER' + "AUTO INFO" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SETUP" + 'ENTER' + "AUTO INFO" + 'ENTER'

➤ **SIMULATION (menu)**

Used in order to use your chart plotter without input data. It generates a display with a moving vessel, so that you can practice using the controls in safety.

... *Speed*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "SPEED" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "SPEED" + 'ENTER'

... *Heading*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "HEADING" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "HEADING" + 'ENTER'

... *Date*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "DATE" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "DATE" + 'ENTER'

... *Time*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "TIME" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "TIME" + 'ENTER'

... *Cursor Control (On, Off)*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "CURSOR CONTROL" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "CURSOR CONTROL" + 'ENTER'

... *Simulation Mode (On, Off)*

Press any soft key + 'SETTING' + "SIMULATION" + 'ENTER' + "SIMULATION MODE" + 'ENTER'

CHOICE FOR NAV-STATION 11:'SERVICE' + "SIMULATION" + 'ENTER' + "SIMULATION MODE" + 'ENTER'

■ **SNR = Signal to Noise Ratio**

The ratio of the magnitude of a signal that of the noise (interference).

■ **SOFT KEY**

The software keys have different functions according to the modes of operation: their labels for the current functions, located on the front panel, are shown on the screen right above the soft key.

■ **SOG = Speed Over Ground**

A calculation of the rate of movement of the ship over the ground.

■ **SPEED**

The current velocity at which you are travelling, relative to a ground location.

➤ **TARGET (or GoTo)**

See [GoTo](#).

■ **TIDE**

The periodic rise and fall of the surface of oceans, bays, etc., due principally to the gravitational interactions between the Moon and Earth.

■ **TIDE INFO**

The [Tide](#) Info feature is the combination of a new [tide](#) heights database that will be included within new C-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 C-CARD.

➤ **TRACK (menu)**

As long as the chart plotter is connected to a positioning instrument, it stores all points in its memory. The chart plotter can store a fix when the distance from its last stored position is

greater than a defined distance or after a defined time. A line connects such points and represents the past course, called the track of the ship.

... **Activate**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "ACTIVATE/DEACTIVATE" + 'ENTER'
CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER' + "ACTIVATE/DEACTIVATE" + 'ENTER'

... **Delete**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "DELETE" + 'ENTER' + 'BEGIN'/'END'/'WHOLE'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER' + "DELETE" + 'ENTER' + 'BEGIN'/'END'/'WHOLE'

... **Config Track Menu**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER' + "CONFIG" + 'ENTER'

... **LOG**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "LOG" + 'ENTER' + 'TOTAL'/'TRIP'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER' + "LOG" + 'ENTER' + 'TOTAL'/'TRIP'

... **Track To Route Menu**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

➤ **TRACK TO ROUTE (menu)**

This function creates a Route from a pre-recorded Track.

... **Track To Route**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

CHOICE FOR NAV-STATION 11: "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER'

... **Advanced**

Press any soft key + 'SETTING' + "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "ADVANCED" + 'ENTER'

CHOICE FOR NAV-STATION 11: "TRACK" + 'ENTER' + "TRACK TO ROUTE" + 'ENTER' + "ADVANCED" + 'ENTER'

■ **TTG = Time To Go**

The estimated time needed to reach your destination, based on your current speed and the distance to destination.

■ **UTC = Universal Time Coordinated**

A time scale based on the rotation of the earth that is used by most broadcast time services.

■ **User C-CARD**

The chart plotter uses the optional User C-CARD to save user data: it is a convenient medium to store and retrieve your information. See Memory Card.

■ **USER POINT**

Place on the chart identified by its coordinates and displayed on the screen with a reference symbol (see [Mark](#), [Waypoint](#)).

➤ **VIDEO INPUT (menu)** (FOR NAV-STATION 11 VCAM)

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

... **Select Video Input** (None, Video Input 1, Video Input 2, Auto Switch)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "SELECT VIDEO INPUT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "SELECT VIDEO INPUT" + 'ENTER'

... **Activate Video Input**

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "ACTIVATE VIDEO INPUT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "ACTIVATE VIDEO INPUT" + 'ENTER'

... **Switching Timeout** (5 sec, 10 sec, 30 sec, 1 min, 5 min, 10 min)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "SWITCHING TIMEOUT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "SWITCHING TIMEOUT" + 'ENTER'

... **Restore Default** (Video Input 1, Video Input 2, All)

Press any soft key + 'SETTING' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "RESTORE DEFAULT" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "INPUT/OUTPUT" + 'ENTER' + "VIDEO INPUT" + 'ENTER' + "RESTORE DEFAULT" + 'ENTER'

■ WAAS = Wide Area Augmentation System

The Federal Aviation Administration (FAA), in cooperation with other DOT organizations and DOD, is augmenting the GPS/SPS with a satellite-based augmentation system, the WAAS. It will provide a signal-in-space to WAAS users to support en route through precision approach navigation. After achieving initial operational capability, the WAAS will then be incrementally improved over the next years to expand the area of coverage, increase the availability of precision approaches, increase signal redundancy and reduce operational restrictions.

➤ WAYPOINT

Any point to which one intends to navigate. A sequence of Waypoints makes up a route plan.

Add WPT: 'ENTER' + "WAYPOINT" + 'ENTER'

Move WPT: place cursor on WPT + 'Move' + move cursor + 'ENTER'

Delete WPT: place cursor on WPT + 'DELETE' + 'ENTER'

Edit WPT: place cursor on WPT + 'Edit' + 'ENTER' + select field (Symbol/Name/Color (for COLOR CHART PLOTTER/Coordinates) using cursor + 'ENTER'

Insert WPT: place cursor on leg + 'INser' + move cursor + 'ENTER'

GoTo on WPT: place cursor on WPT + 'GoTo' + 'ENTER'

Find WPT: press any soft key + 'MAP' + "FIND" + 'ENTER' + "USER POINTS" + 'ENTER'

Info on WPT: CHOICE FOR NAV-STATION 11: 'FIND' + "USER POINTS" + 'ENTER'

Send WPT: press any soft key + 'SETTING' + "LIST" + 'ENTER'

Receive WPT: CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER'

press any soft key + 'SETTING' + "LIST" + 'ENTER' + "SEND" + 'ENTER'

press any soft key + 'SETTING' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

CHOICE FOR NAV-STATION 11: 'SERVICE' + "LIST" + 'ENTER' + "RECEIVE" + 'ENTER'

■ WGS-84 = World Geodetic System 1984

Coordinate System or Datum developed by the Defense Mapping Agency (DMA).

■ ZOOM-IN

Shows more detail in a smaller area.

■ ZOOM-OUT

Operates similarly to zoom -in, but in the reverse, showing a wider but less detailed view.

■ XTE = Cross Track error

The distance from the ship's present position to the closest point on a line between the origin and destinations Waypoints of the navigation leg being travelled.

7. System Test

7.1 SYSTEM TEST

If you have connected your position-finding device according to the instructions, and chosen the proper menu selection for your device, and are still having problems with your chart plotter, the extended auto-test should help determine the problem. Make sure the chart plotter is turned Off. While pressing and holding any other key, turn the chart plotter On. A new menu will appear on the display:

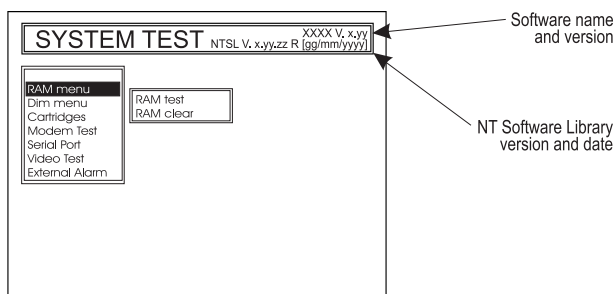


Fig. 7.1 - System Test

Use the cursor key to select the desired test: this will display in reverse video and with the relative menu window. To choice the test press 'ENTER'. To exit from any submenu press 'CLEAR'. To exit from the System Test turn Off the chart plotter.

7.1.1 RAM Menu

This test verifies the integrity of the memories and if desired during this test all the internal memory can be erased and the default setting restored.

■ RAM Test

To verify the integrity of the RAM. If on the screen the message "ERROR" appears, the RAM is physically damaged.

■ RAM Clear

To clear internal memory. If the chart plotter exhibits unusual behavior, or appears to be malfunctioning, it may be possible to correct the problem by clearing RAM. This operation will erase all Marks, Events, Routes, stored track plots and destinations. It will also return all selections (Input Data Format, Autopilot selection, etc.) to original default values.

7.1.2 DIM Menu

To select the desired value for keypad light.

■ Contrast

The first option allows to adjust the contrast. Each time you pressed the cursor key

to right, the screen will decrease brightness, instead of to left it will increase brightness.

■ Backlight

The second option allows to set the keyboard backlight.

7.1.3 CARTRIDGES

To check the C-CARD.

■ Internal Data Base Test

The first option allows to check the background cartography.

■ C-CARD Test

To test the C-CARD. There are the possible situations:

1. if there is a C-CARD inserted in the slot and there is not a malfunction, the name of the C-CARD zone and the message "OK" are shown.
2. if there is a C-CARD inserted in the slot, but it is a damaged C-CARD
3. if there is not any C-CARD inserted in the slot, the message "not present" is shown.
4. if there is an User C-CARD inserted in the slot, the message "USER C-CARD" is shown.

■ C-CARD Connector

Indicates if there is a malfunction in the connector. It is used only in production.

7.1.4 MODEM TEST

To check the Modem connections. Press 'ENTER' to select the preferred Port related to the connections made, to the Port that the Modem C-COM is connected.

7.1.5 SERIAL PORT

If you are having problems receiving data from the position-finding instrument, this test should help determine the problem.

■ Change Parameters

To change the parameters of the serial interface. This menu allows to select the **Port**, the **Baud Rate** between 4800 or 9600, the **Data Bits** (Word Length) between 7 or 8, the **Parity** between even, odd or none, the **Stop Bits** between 1 or 2.

■ Input Data Display

To allow the chart plotter to act as a computer terminal and display the incoming data exactly as it received. If the data displayed on the screen is unrecognizable, you may have selected the wrong input parameters for your particular receiver. Check your receiver manual to be sure that you have selected the proper interface format. If the screen is blank, you may have a broken connection, and no data is being received. Use 'ZOOM IN' to stop (or continue after pause) data displaying, 'ENTER' to show data in hex or ASCII mode (normal or small) and 'CLEAR' to exit.

7.1.6 VIDEO TEST

Allows a full test on the functionality of the screen.

7.1.7 EXTERNAL ALARM

To check if the External Alarm has been transmitted.

appendix **A.** Troubleshooting

THE CHART PLOTTER DOES NO TURN ON

Make sure that the correct voltage (10-18 volt dc) is present. Check also that the polarity is correct. Refer to the Par. 2.2.

THE CHART PLOTTER DOES NOT GET A VALID FIX

Make sure that no metal obstacle is placed around the chart plotter acting as a shield for the antenna. If, after 15 minutes, the chart plotter does not get the fix, turn it Off and On again.

THE SCREEN BECOMES DARK AFTER SOON EXPOSITION

Adjust contrast (see Par. 2.3).

THE CHART PLOTTER DOES NOT RESPOND TO ANY COMMAND

Try to turn Off, and then turn On. If the problem persists, erase the memory (see Par. 7.1).

appendix **B.** GPS Receiver

B.1 INSTALLING

Choose a location for the antenna that has a clear view of the sky. Ensure there are no major obstructions or fixtures in the immediate proximity to the antenna. The antenna relies on direct "line of sight" satellite reception. If you are unsure that the chosen location is suitable it may be advisable to mount the antenna in a temporary manner to verify correct operation. The thread used on the antenna (1 inch, 14 TPI) is an industry standard thread used on a wide range of mounting brackets, including the swivel joints commonly used for angled surfaces. However due to the manufacturing process of these mounting brackets you may see that there is some slop when tightening down the antenna to the bracket. This is of no concern however as the antenna must be tightened until the antenna stops rotating on the antenna mounting bracket.

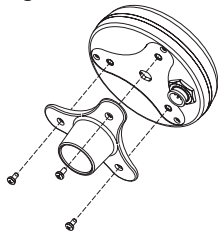


Fig. B.1 - Installazione Antenna GPS (I)

The antenna design also allows for easy flush mounting.

1. Apply the adhesive mounting template sheet in the area that was verified to receive satellite signal well.
2. Then, following template instruction, drill a 0,95 inch (24 mm) hole and three 0,155 inch (4 mm) holes.

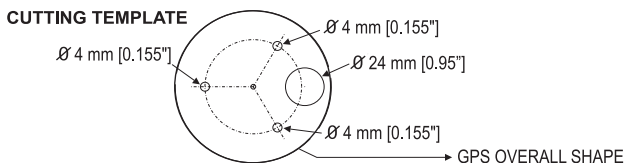


Fig. B.1a - Installazione Antenna GPS (II)

3. Remove the template and let the cable go through the central hole.
4. Apply a small coat of RTV to the underside of the antenna.
5. Place the antenna and then screw it with the three M3 screws.

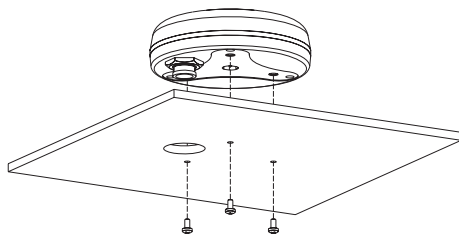


Fig. B.1b - Installazione Antenna GPS (III)

B.2 DIMENSIONS

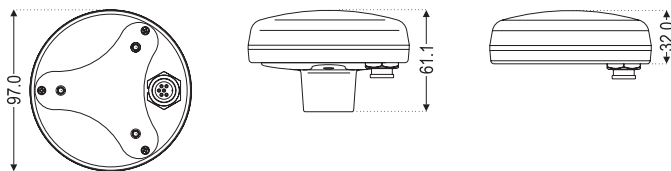
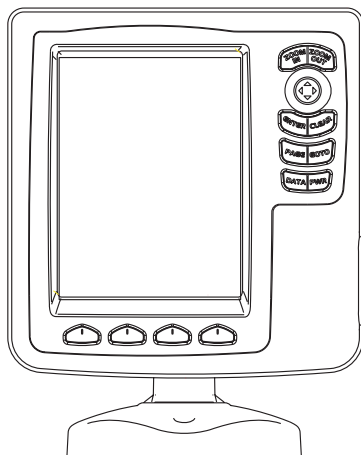


Fig. B.2 - Dimensioni Antenna GPS

NAV-STATION 5

NAV-STATION 5 FLUSH



TECHNICAL SPECIFICATIONS

- | | |
|-------------------------------|---|
| • Power Consumption | : 600 mA max @12V |
| • Power Supply | : 10 - 35 Volt dc, 7Watt max |
| • Display | : TFT trasflective LCD sunlight (active area 5") |
| • Display Resolution | : 320 x 240 pixels |
| • Cartography | : C-MAP NT+ & MAX C-CARD |
| • Operating temperature range | : 0/+55 degrees Celsius |
| • Memory | : Non volatile with battery back-up |
| • Keyboard | : Silicon rubber, backlight |
| • Weight | : 900 gr |
| • Accessories | : . Fuse 2 Amp. + fuseholder
. External Bracket and I/O cable 1,5 mt/5.9"
. Chart plotter's protective cover
. Flush mounting kit
. (only for Nav-Station 5 Flush) Smart DGPS WAAS Receiver with cable 15 mt/45 feet
. User Manual |

INSERTING/REMOVING PROCEDURE

INSERTING C-CARD

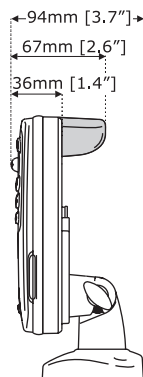
Remove the front cover as explained in the following picture. Hold the C-CARD by the long inclined side so that you can see the C-MAP label and gently push the C-CARD into the slot as far as it will go to hold fixed into the slot and place the front cover again.



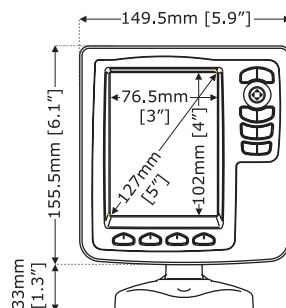
REMOVING C-CARD

Remove the front cover and the C-CARD remove out of the slot.

DIMENSIONS

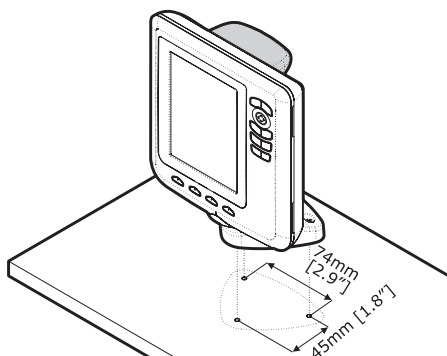
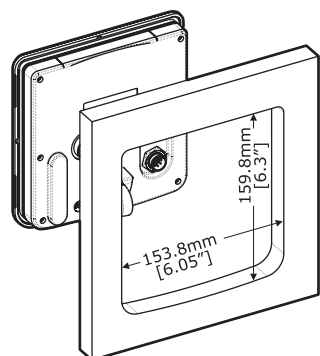


GRAY part is present only on chart plotter with INTERNAL GPS.



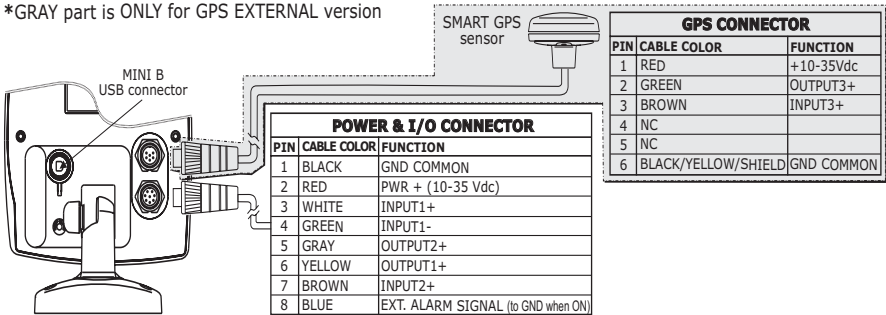
INSTALLATION

GRAY part is present only on chart plotter with INTERNAL GPS.



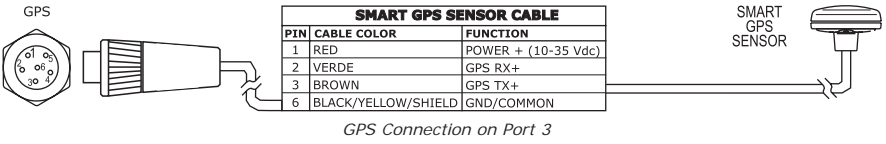
EXTERNAL WIRING

*GRAY part is ONLY for GPS EXTERNAL version

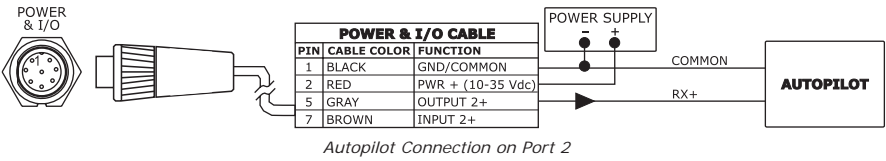
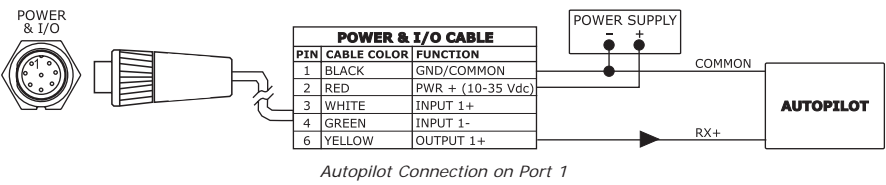


TYPICAL CONNECTIONS - "POWER & I/O" CONNECTOR

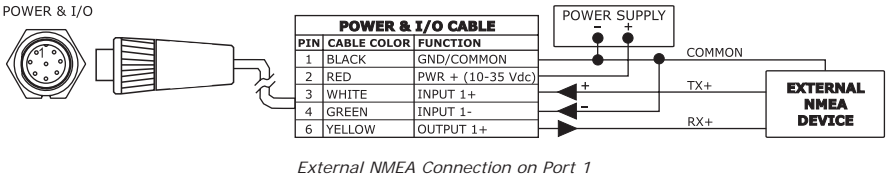
GPS CONNECTION

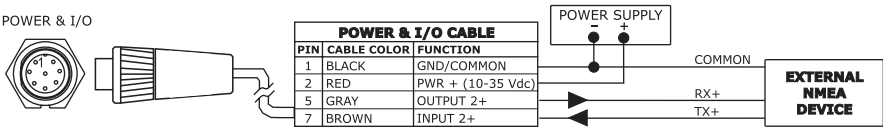


AUTOPILOT CONNECTIONS



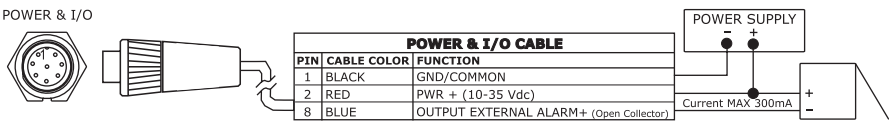
NMEA EXTERNAL CONNECTIONS



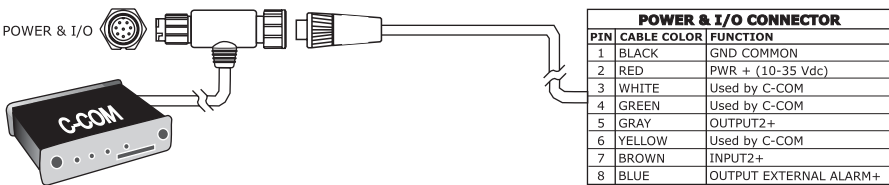


External NMEA Connection on Port 2

EXTERNAL ALARM CONNECTION



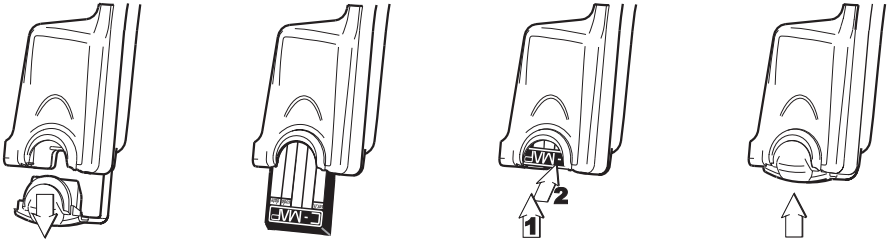
C-COM CONNECTIONS



POWER & I/O Connection on Port 1

User Manual 91

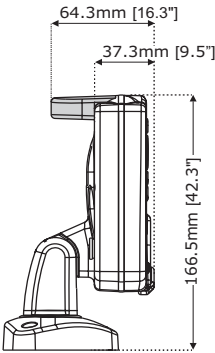
C-CARD into the slot; push the C-CARD in as far as it will go, then move it to the bottom to hold fixed into the slot and place the protective plug again:



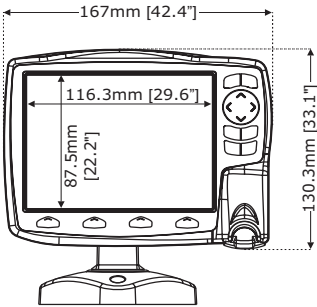
REMOVING C-CARD

Open the C-CARD protective plug pressing to the bottom. Press lightly the C-CARD you wish to remove and move it to the top until you hear a click: the C-CARD will eject out of the slot.

DIMENSIONS

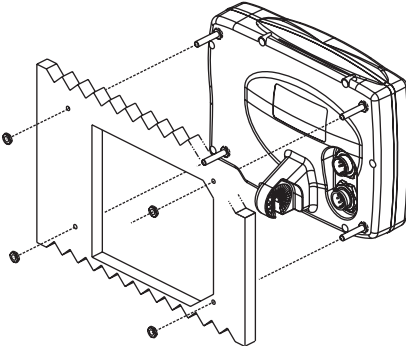
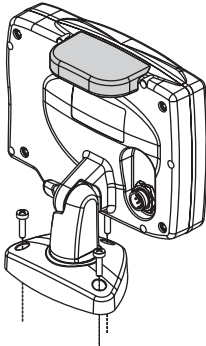


GRAY part is present only on chart plotter with INTERNAL GPS.



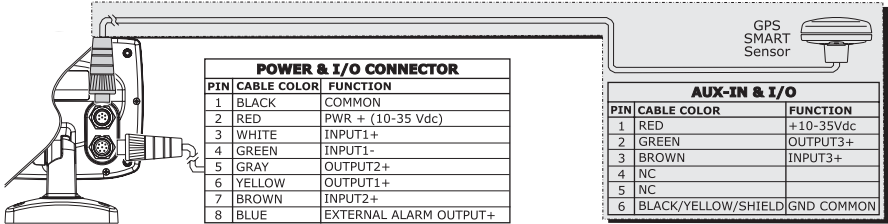
INSTALLATION

GRAY part is present only on chart plotter with INTERNAL GPS.



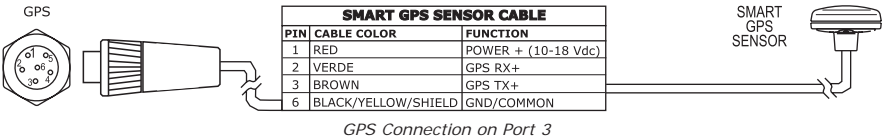
EXTERNAL WIRING

GRAY part is ONLY for GPS EXTERNAL version

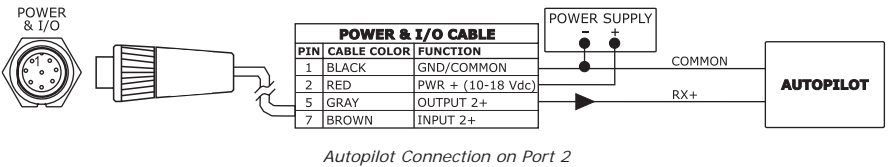
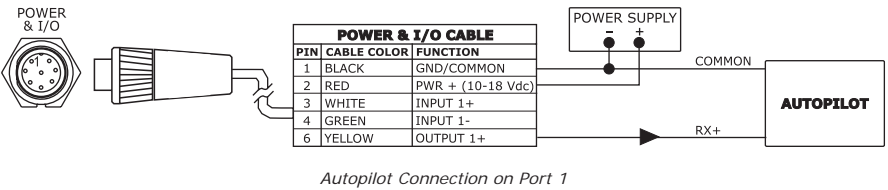


TYPICAL CONNECTIONS - "POWER & I/O" CONNECTOR

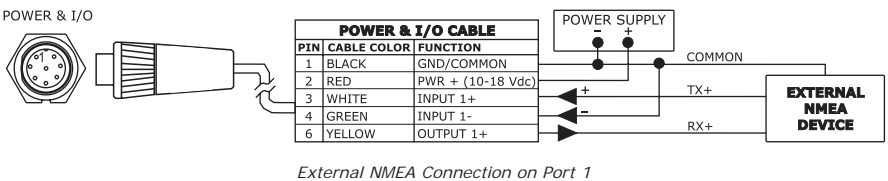
GPS CONNECTION

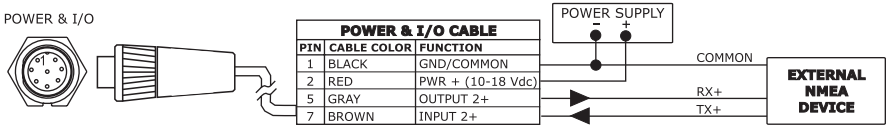


AUTOPILOT CONNECTIONS



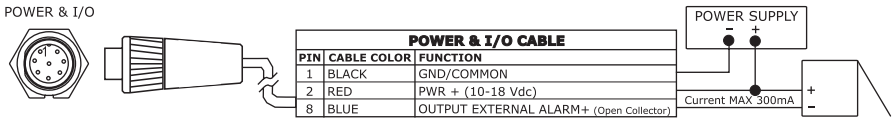
NMEA EXTERNAL CONNECTIONS



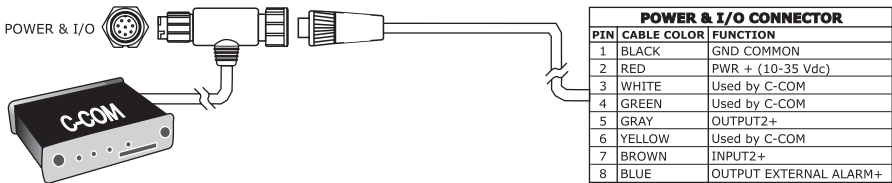


External NMEA Connection on Port 2

EXTERNAL ALARM CONNECTION

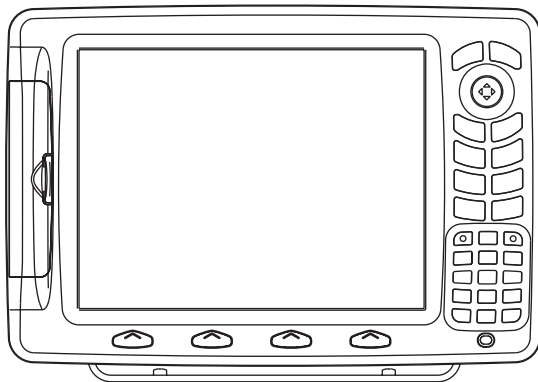


C-COM CONNECTIONS



POWER & I/O Connection on Port 1

NAV-STATION 11 COLOR NAV-STATION 11 SUN COLOR NAV-STATION 11 SUN COLOR VCAM NAV-STATION PANORAMA



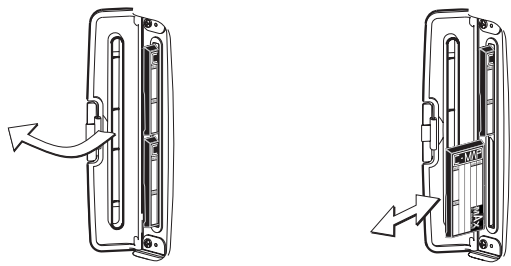
TECHNICAL SPECIFICATIONS

- | | |
|--|--|
| • Power Consumption | : 1280 mA max @12V |
| (only for VCAM) | : 1400 mA max @12V |
| • Power Supply | : 10 - 35 Volt dc, 15 Watt max |
| (only for VCAM) | : 10 - 35 Volt dc, 17 Watt max |
| • Display | : TFT trasflective LCD sunlight (active area 10.4") |
| • Display Resolution | : 640 x 480 pixels |
| (per PANORAMA) | : 800 x 600 pixels |
| • Video Input | : PAL or NTSC video signals automatically selected (2 input) |
| (only for Nav-Station 11 Sun Color VCAM) | |
| • Cartography | : C-MAP NT+ & MAX C-CARD |
| • Operating temperature range | : 0/+55 degrees Celsius |
| • Memory | : Non volatile with battery back-up |
| • Keyboard | : Silicon rubber, backlight |
| • Weight | : Kg 1,6 |
| • Accessories | : . Fuse 2 Amp. + fuseholder |
| | . External bracket and I/O cable 1,5 mt/5.9" |
| | . Chart plotter's protective cover |
| | . Flush mounting kit |
| | . Smart DGPS WAAS Receiver with cable 15 mt/45 feet |
| | . User Manual |

INSERTING/REMOVING PROCEDURE

INSERTING C-CARD

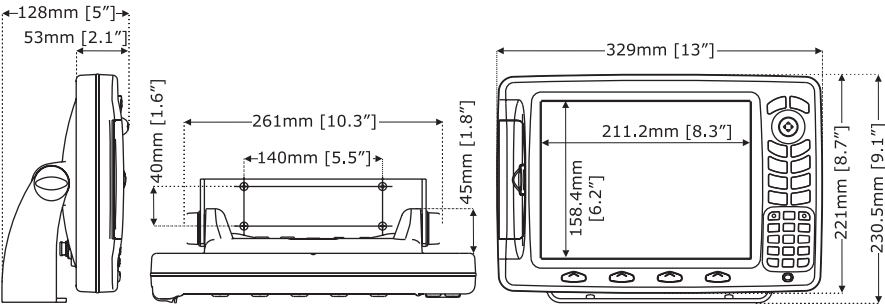
Hold the C-CARD by the short inclined side so that you can see the C-MAP label. Open the door, gently push the C-CARD into one of the two slots; push the C-CARD in as far as it will go, then close the door to hold fixed into the slot.



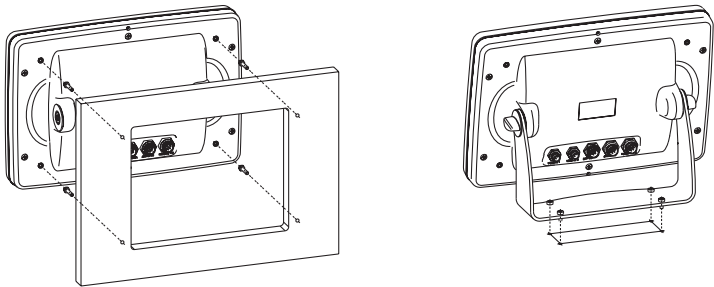
REMOVING C-CARD

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

DIMENSIONS

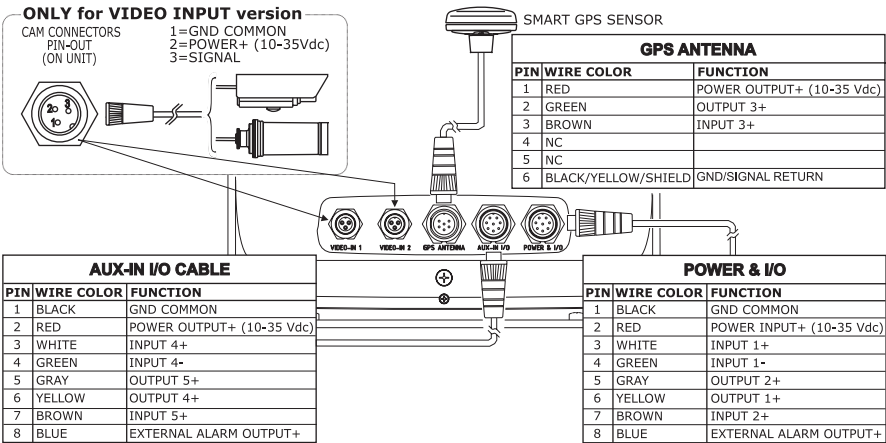


INSTALLATION

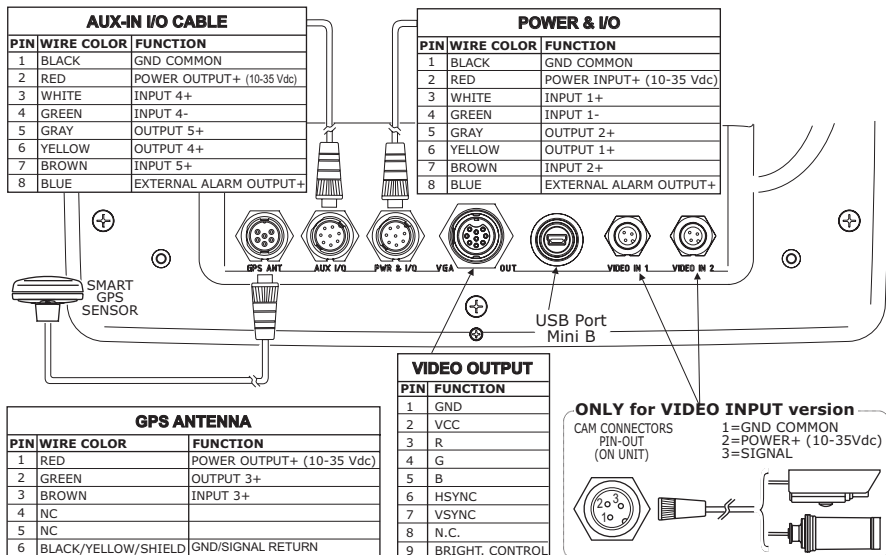


Note
Installation is for all Nav-Station 11" rears.

EXTERNAL WIRING



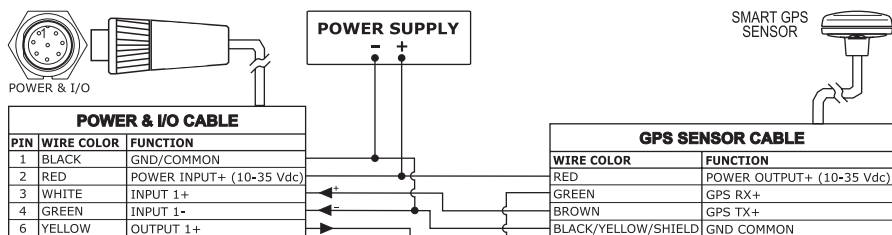
External Connections for Nav-Station 11 Color/Sun Color/Sun Color VCAM



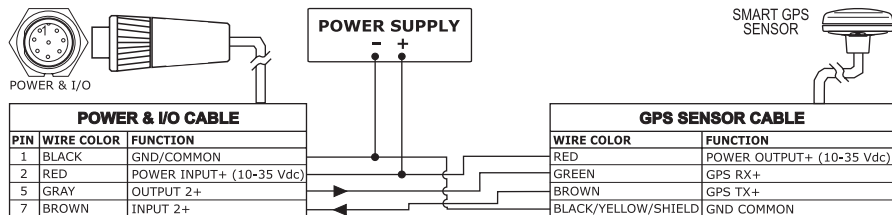
External Connections for Nav-Station PANORAMA

TYPICAL CONNECTIONS- "POWER & I/O" CONNECTOR

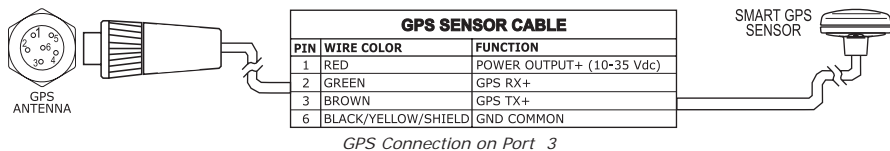
GPS CONNECTIONS



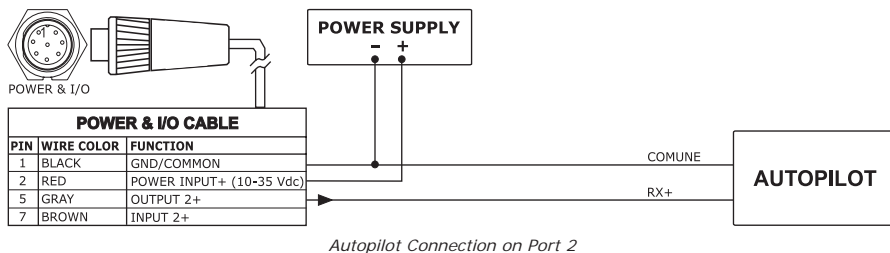
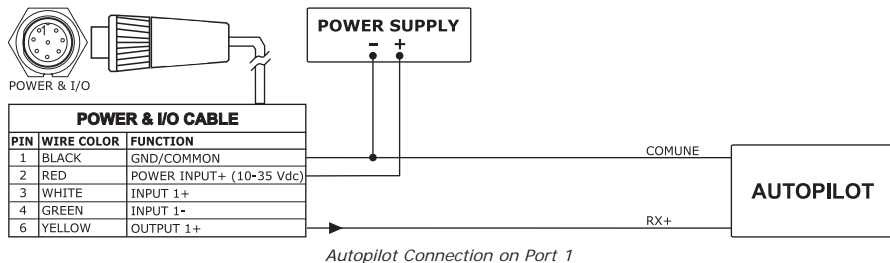
GPS Connection on Port 1



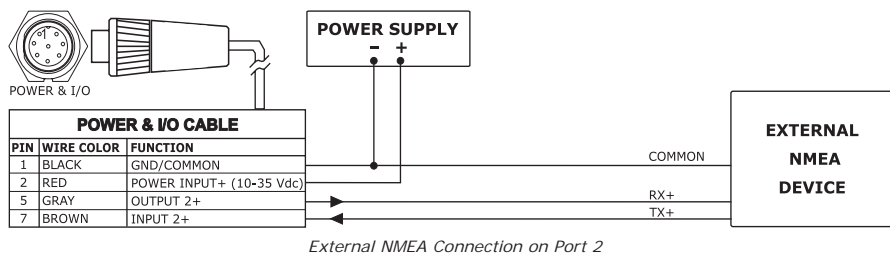
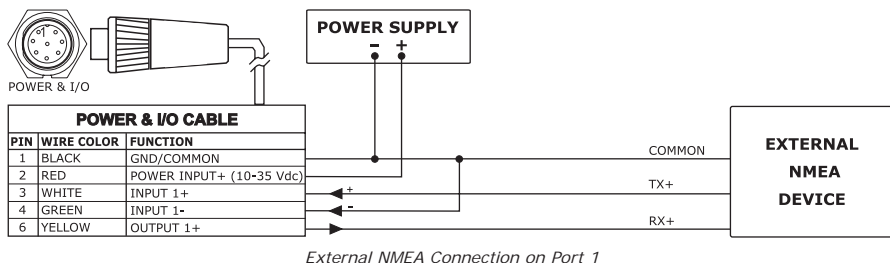
GPS Connection on Port 2



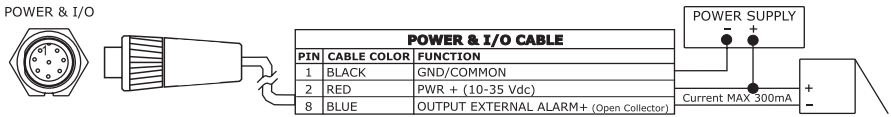
AUTOPILOT CONNECTIONS



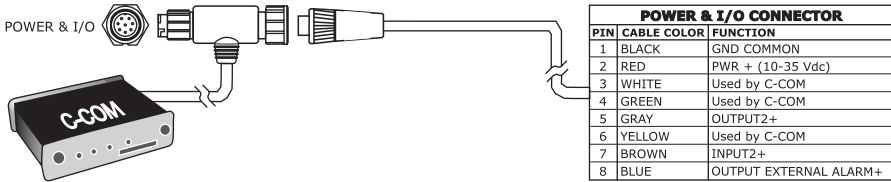
NMEA EXTERNAL CONNECTIONS



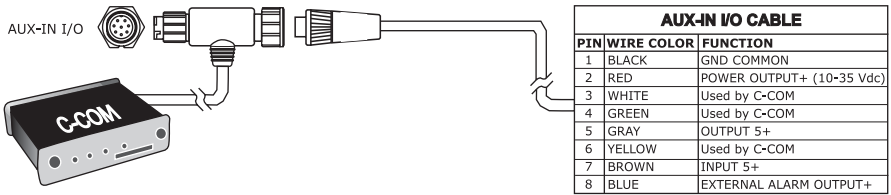
EXTERNAL ALARM CONNECTIONS



C-COM CONNECTIONS



POWER & I/O Connection on Port 1



POWER & I/O Connection on Port 4

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