



ECDIS

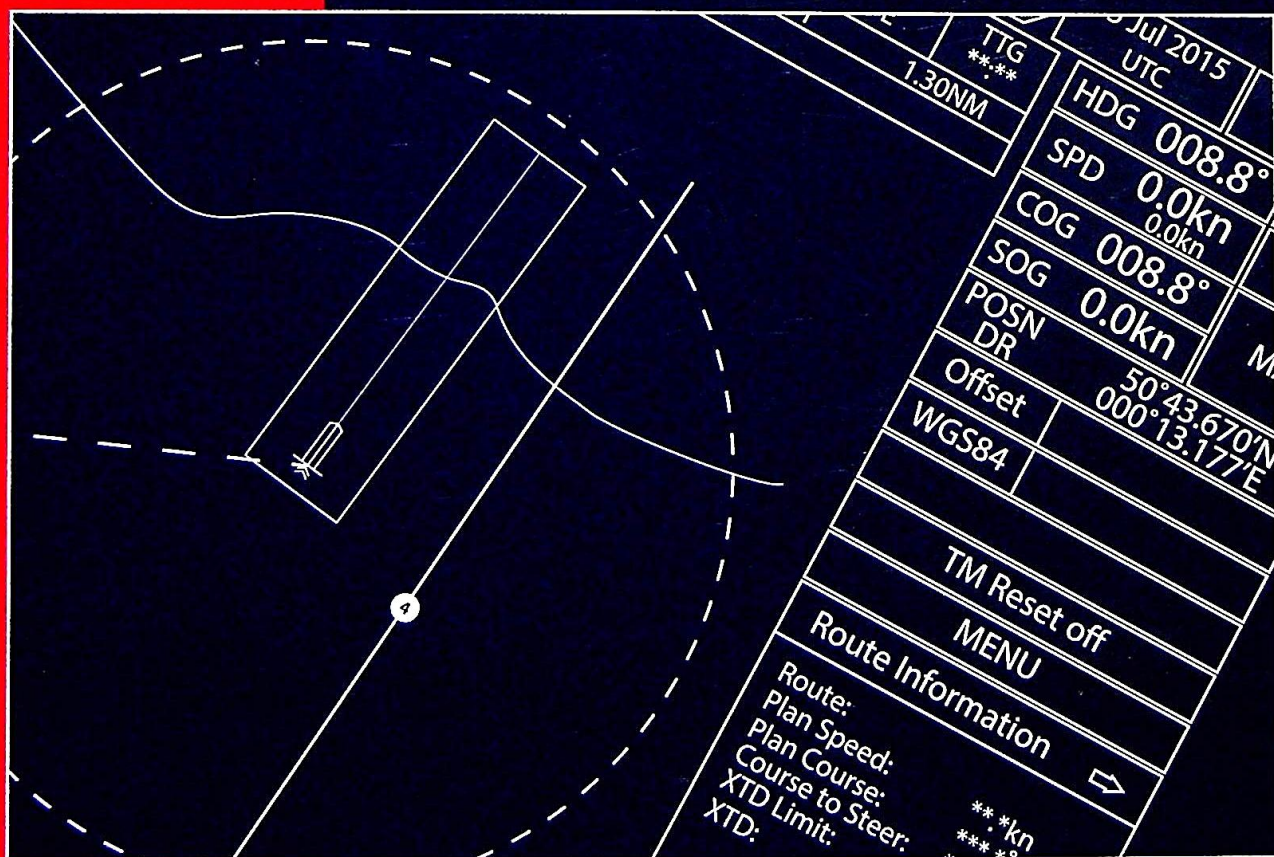
Type Specific Information





ECDIS

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ECDIS Type Specific Information

2021–2022 Edition Volume 2

WITHERBYS



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Volume 2

WITHERBYS



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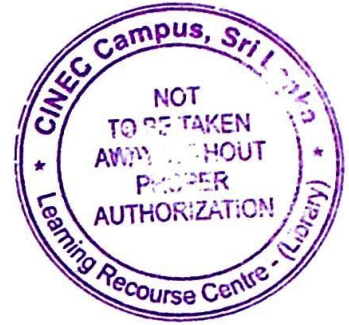
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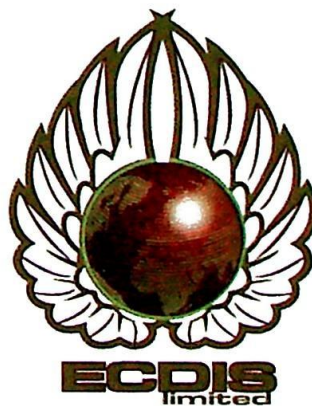
E C D I S

Type Specific Information

2021–2022 Edition

Volume 2

By: **ECDIS Ltd**



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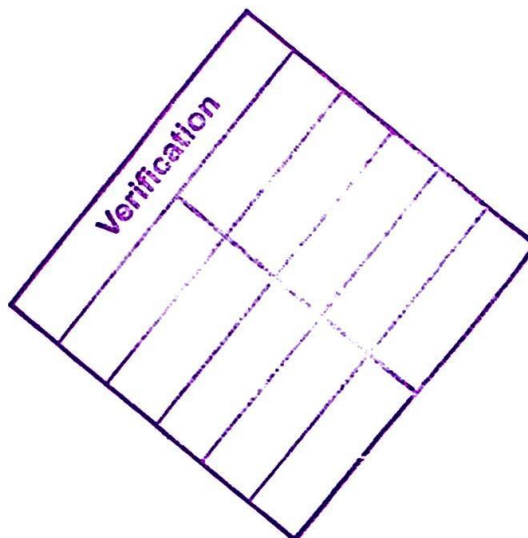
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Navigation House,
3 Almondvale Business Park,
Almondvale Way,
Livingston EH54 6GA,
Scotland, UK

+44 (0)1506 463 227
info@witherbys.com
witherbys.com

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Introduction

Type Specific and Familiarisation Training

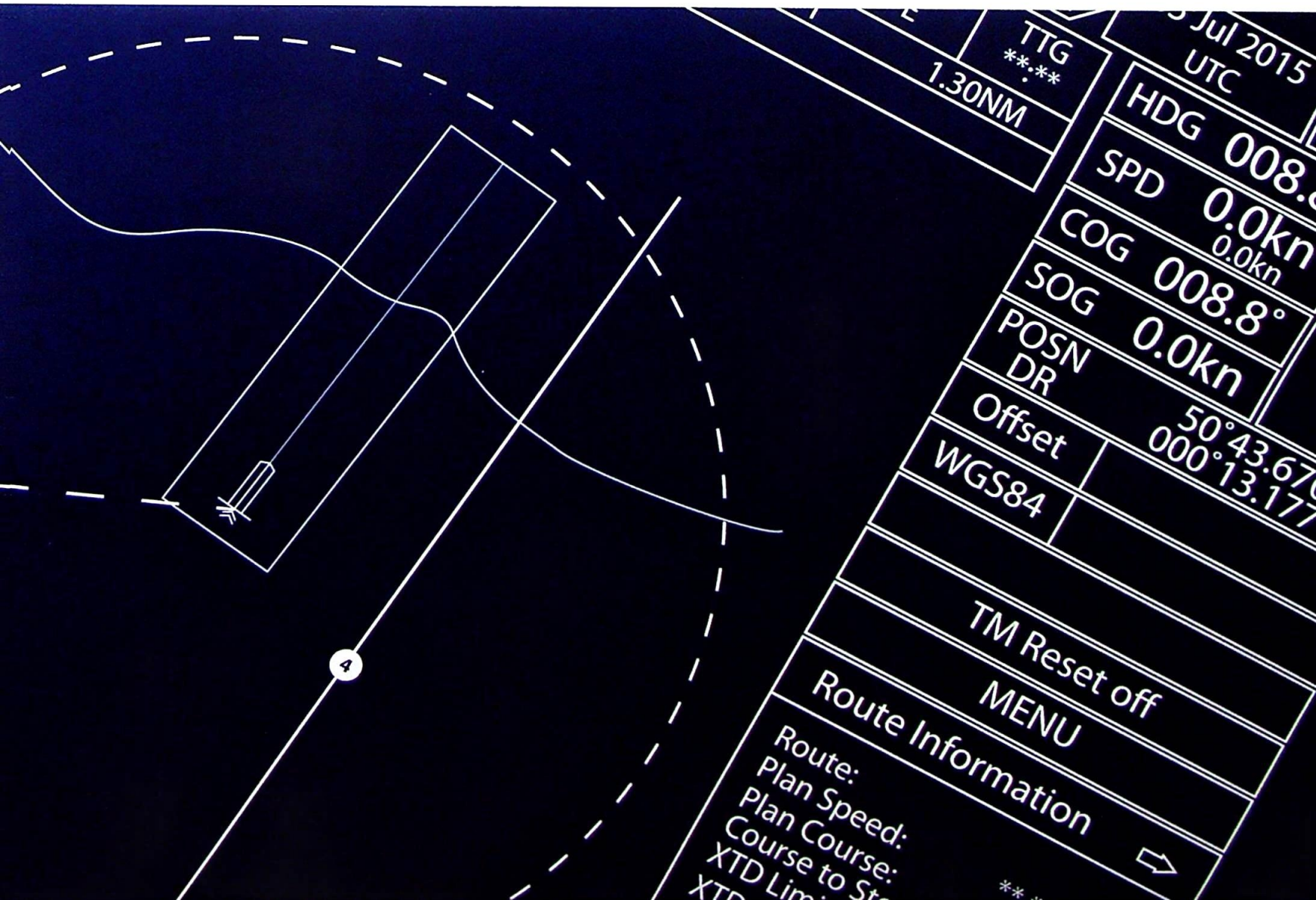
All ECDIS operators, having completed generic training, are required to undertake type specific ECDIS training in order to be familiar with the equipment in use on their vessel. This is in line with ISM and flag State legislation (flag State dependent).

All ECDIS operators are to be familiar with the specific equipment in use on board their vessel, having completed an appropriate type specific training course. At present, there are no IMO guidelines for type specific training and so the content for any course should, as a minimum, encompass that listed in Section 1.1.

In addition to type specific training, onboard familiarisation training is considered best practice. Each manufacturer's software version and installation may vary from the type that the ECDIS operator has been trained on. Therefore, a Familiarisation Checklist can assist ECDIS operators in gaining and refreshing knowledge of ship specific installations.

Small variations in menu structures or terminology may be experienced due to the larger number of software patches, updates and optional extras available for each manufacturer. However, all efforts have been made to give a reflection of the manufacturers' latest version of software based on the average optional extras that ships purchase. Should you be aware of any minor updates that need to be added, please email: help@ecdis.org

Type Specific ECDIS Course Content



1.1 Setting to Work

Documentation and Procedures

Establish whether there are instructions concerning the use of the ECDIS and ensure that these are followed.

- a. The procedures for use of ECDIS units need to be carefully written to establish standard operating procedures (SOPs). This document should include, but not be limited to, the following:
 - General system set-up
 - guidelines on system use
 - system set-up for pilotage, anchoring, coastal and open ocean
 - minimum display requirements
 - maximum display requirements
 - operation in ECDIS, RCDS and ECS modes
 - procedures for operating in pilotage, anchoring, coastal and open ocean
 - route planning
 - route monitoring
 - alarms, indications/warnings configuration
 - fixing/GPS cross-check frequency
 - transition to paper arrangements
 - system management
 - software updating
 - updating of data
 - data storage
 - data backup
 - permit renewal and procuring additional permits
 - passwords and system access
 - emergency procedures for ECDIS failure
 - virus protection policy and use of USB memory sticks
 - pre-sailing checks.
- b. The document should be read and signed by all watchkeepers, stating that they understand the procedures relating to the use of ECDIS on board.
- c. Produce check-off cards to ensure that the system is set up correctly so that memory does not have to be relied upon. The cards should at least cover setting up the system in the following environments:
 - Pilotage
 - anchoring
 - coastal
 - open ocean.
- d. Conduct a risk assessment in accordance with MGN 285.

Equipment

Establish whether the ECDIS and the backup equipment are flag State approved systems.

- a. Sight the certificate that states the ECDIS conforms to IMO Resolutions A.817(19) / MSC.232(82).
- b. If the system is found to be an ECS, paper charts must be used as the primary means of navigation.
- c. Establish whether the systems are connected via LAN. If not, it will be incumbent upon the OOW to ensure that data is transferred manually between the systems.

Understand the sensor connections that feed the ECDIS and understand what the mandatory connections are.

- a. Mandatory connections are as follows:
 - GPS or DGPS (continuous fixing position source)
 - gyro
 - speed log.
- b. Determine what other connections are required, such as anemometer and NAVTEX, and whether your system can accommodate them.

Establish the reference for each sensor, eg ground, sea or ship stabilised.

Establish an accurate system set-up by configuring ship specific characteristics. The following should be considered but are not exhaustive:

- Length
- breadth
- draught
- load condition
- equipment offsets
- AIS data
- radar information overlay (RIO)
- auto-track settings
- turning radius or advance and transfer data.

In the event of ECDIS failure, establish how to switch between the primary and backup system.

Data

Establish what mode of operation the passage will require, ie ECDIS, RCDS or ECS/paper?

- a. Ensure that the data service is official:
 - If ENC, S-57 compliant and issued by a government authorised HO
 - if RNC, S-61 compliant and issued by a government authorised HO.
- b. Ensure that the data service is up to date and sufficient to cover the entire voyage in accordance with SOLAS requirements.
- c. Ensure that the data is correctly loaded onto all systems and that permits correspond with installed chart data.
- d. Contact flag and discuss the carriage requirements for all the following modes:
 - ECDIS (ENC)
 - RCDS (RNC)
 - ECS (paper charts).
- e. If operating in RCDS mode, an appropriate folio of paper charts may be required (flag State dependent). Furthermore, RCDS mode may not be recognised by flag.
- f. If paper charts are required, consider the following:
 - Determine suitability
 - determine quantity
 - determine location
 - determine the state of preparation required
 - determine the frequency of backup.
- g. Determine where base, update and backup data discs are stored.

Determine how the process of updating will work.

- a. How will updates arrive on board?
- b. Who will apply the updates?
- c. If automatic updates, how will this affect the safety monitoring of your system when it is updating?

- d. Note expiry dates of licence and permits to ensure that cells are renewed in a timely manner.
- e. Determine how to obtain new cells and permits.

Training

Ensure that all personnel are adequately trained in the use of the ECDIS system by undertaking a flag State approved generic IMO 1.27 model course and type specific training on the ship specific equipment.

Administration

Ensure that the ECDIS manufacturer's operator's manual and a list of alarms and warnings for the specific system are available on the bridge. It should be noted that system user guides are generally poor and are not a substitute for adequate training.

1.2 Familiarisation

The Basics

Determine how to switch the ECDIS on and off.

Establish what settings are saved in the event of a system crash and what must be restored.

Regarding the ECDIS software and hardware, establish the following:

- Screen layout options
- controls
- screen display
- cursor control
- user interface/menu navigation
- shortcut keys/keyboard shortcuts
- hardware controls and switches
- quickest method of displaying own ship position
- single operator action keys for marine information overlay (MIO) and standard display setting.

Identify all automatic functions required for monitoring ship's safety, such as the display of position, heading, course, speed, depth, safety values and time.

Regarding data, determine how to do the following:

- Set system units
- scroll
- zoom
- centre on ship
- view cursor data
- determine scale of charts
- select the best scale chart
- select a particular scale.

Determine how to access the main menu and select menu options.

Establish how to interrogate an RNC and charted features of an ENC.

Presentation of Data

Determine how to set and display the following:

- Day, dusk, night palette
- brightness and contrast.

Specifically for ENCs

- Safety Depth and Safety Contour
- shallow and deep contours

- two and four colour depth shades
- paper chart traditional and simplified symbology
- select base, standard, All/Other and any custom or additional display
- configure display settings
- save configured settings
- display of Zone of Confidence (CATZOC) information.

Establish how to display ECDIS Chart 1.

Safety Settings

Establish how alarms and indications/warnings are generated and where they are displayed.

Establish how to acknowledge an alarm, indication/warning.

Establish where an alarm, indication/warning can be reviewed once acknowledged.

Charts

Determine how to install licences, permits and charts on the system.

Determine how to ascertain whether an installation was successful.

Determine how to access the chart menu and differentiate between different chart products installed.

Determine how to select a chart for display.

Determine how to check the update status of loaded charts.

Determine how to update both RNC and ENC charts on your system.

If available, determine how the system automatically updates and what the consequences are when it is updating.

Determine how to apply manual updates.

Determine how to find and view updates/NTMs.

Determine how to view AIO and T and P overlays.

1.3 Navigation Tools

Navigation Tools

Determine how to show and hide the following marine information overlays, if available:

- RIO
- ARPA tracks and information
- AIS tracks and information
- NAVTEX information
- all other available information.

Determine how to add, edit and delete mariner symbols, navigation marks, objects, shapes, information and text.

Establish how to apply the danger attribute to mariner symbols, objects, shapes, information and text.

Establish how to utilise the EBL and VRM function.

1.4 Planning a Route

Basic Route Planning

Regarding route planning, determine how to do the following:

- Plan a route using rhumb lines and via Great Circle
- edit Great Circle route properties
- edit a route
- add, insert, edit and delete waypoints
- name waypoints

- add an ETA, ETD
- set XTD
- voyage optimisation parameters
- display multiple routes
- save routes
- approve routes
- activate routes.

Regarding route checking, determine the following:

- Settings selected for checking your route
- the display of associated warnings
- selection of safety parameters.

Confined Waters Planning

Regarding confined waters planning, determine how to configure the following:

- Turning circles/advance and transfer/wheel over point
- distance to run ticks.

Determine how to display the following:

- Course, leg, speed annotation
- XTD
- waypoint names.

Determine how to utilise specific pilotage functions such as:

- Parallel index lines
- depth contour line
- EBL/VRM
- anchoring tools.

1.5 Monitoring a Route

Route Monitoring

Determine how to load the route and associated items into all ECDIS units.

Determine how to select the primary or alternate route for display and how to distinguish between them.

Determine how to select items such as manual updates or user charts overlays for display.

Determine the available display orientation modes and how to select them:

- RM North Up
- RM Course Up
- RM Head Up
- TM North Up
- TM Course Up
- TM Head Up.

Determine the available display motion modes and how to select them:

- Relative Motion
- True Motion.

If using RM, determine how to reposition own ship on the display or utilise any look-ahead function.

If using TM, determine how to configure TM reset for chart redraw.

Determine how to configure the following:

- Display of vessel symbol and contour
- vessel track
- time labels
- velocity vectors for own ship, AIS and ARPA tracks
- AIS and ARPA track
- display of secondary track
- anchor watch alarms.

Establish whether alarms, indications/warnings can be configured on your system.

Establish the appropriate menu or panel for display of route monitoring information, so that the following information is displayed:

- Position
- course
- heading
- speed
- depth
- time.

Determine how the look-ahead is configured and activated.

Establish specifically what the ship's look-ahead will alarm for and whether it needs to be activated in order to do so.

Determine how the predictor is configured and activated.

Establish the procedure for integrating ECDIS with a track-keeping autopilot. This includes setting parameters and understanding system frailties.

Determine the method of switching between sources, such as primary and secondary position fixing systems, and the dangers inherent within.

Determine how to manually input a position fix using the following:

- Visual bearings (LOPs)
- radar ranges
- transferred position lines
- manually input latitude and longitude.

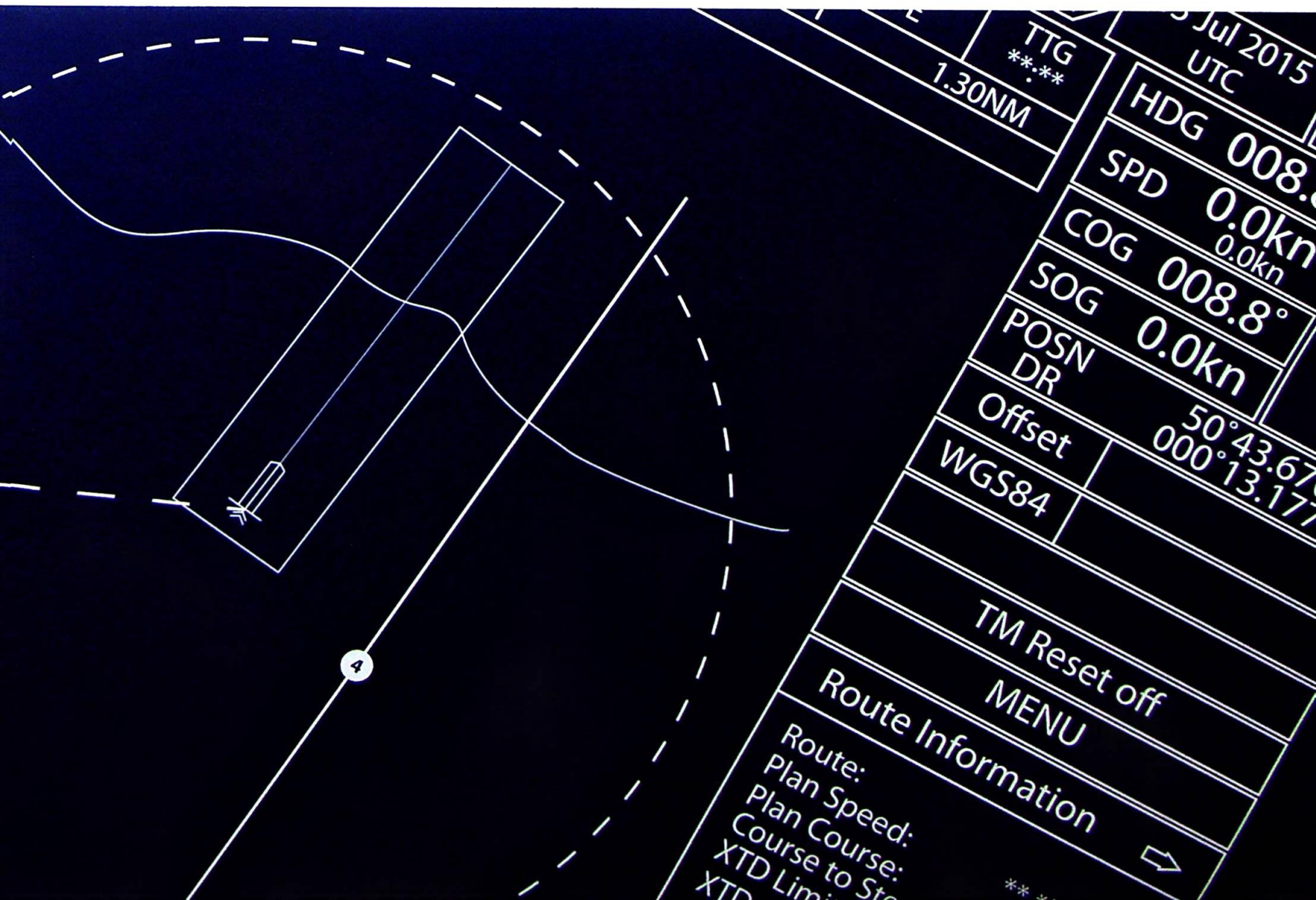
Determine how the system may be placed in DR mode.

Determine how to activate a MOB and event marker in the system.

Determine what information is recorded in the logbook.

Determine how to review a voyage using the playback recorder function.

ECDIS Type Specific Information



1. ChartWorld eGlobe G2 ECDIS – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display Become familiar with the basic chart functionality from the main display.	
	Task Bar	Toolbar
	S-Mode	BSE
	Sailing Mode	Traffic
	Planning Mode	ERBL
	Chart Loader	Zoom
	View Alerts	Display
	Settings	NAV
	Profiles	Pick
	Integrator	Chart Settings
	Info module	Go to Ship
	Brightness	
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Toolbar	
	BSE	NAV
	Traffic	Pick
	ERBL	Chart Settings
	Zoom	Go to Ship
	Display	Radar Overlay (ON/OFF)
	AIS (ON/OFF)	RM/TM (RM/TM)
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	NAV	Chart Loader
	Own Ship	Manual Updates
	Antigrounding	Report
	Display SP (ON/OFF)	
	Safety Contour	
	Look-ahead configuration	
	Chart Settings	
	Chart Display	Chart Products
	Show Accuracy Objects with time limits	Show Chart Boundaries (Index)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Planning Mode	
	Route	User Chart
	Reverse	Check

ChartWorld eGlobe G2 ECDIS – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Display	Traffic
Split Screen	Targets
Orientation	ARPA Targets
RM/TM	Targets Past Positions
Frame	AIS Targets
	AIS Layers
	Targets Association
	CPA/TCPA
	Radar Overlay

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Chart Loader

Install	Review Updates
Inventory	Manual Updates
Report	Chart
Settings	NAVTEX
	Chart 1

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensors

SPD/CRS Page	Other Page
POSN Page	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Task Bar	NAV
View Alerts	Antigrinding

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Task Bar	NAV
Settings	Own Ship
Integrator	
File Manager	Replay Mode
Service Menu	

11. ECDIS Operator's Manual

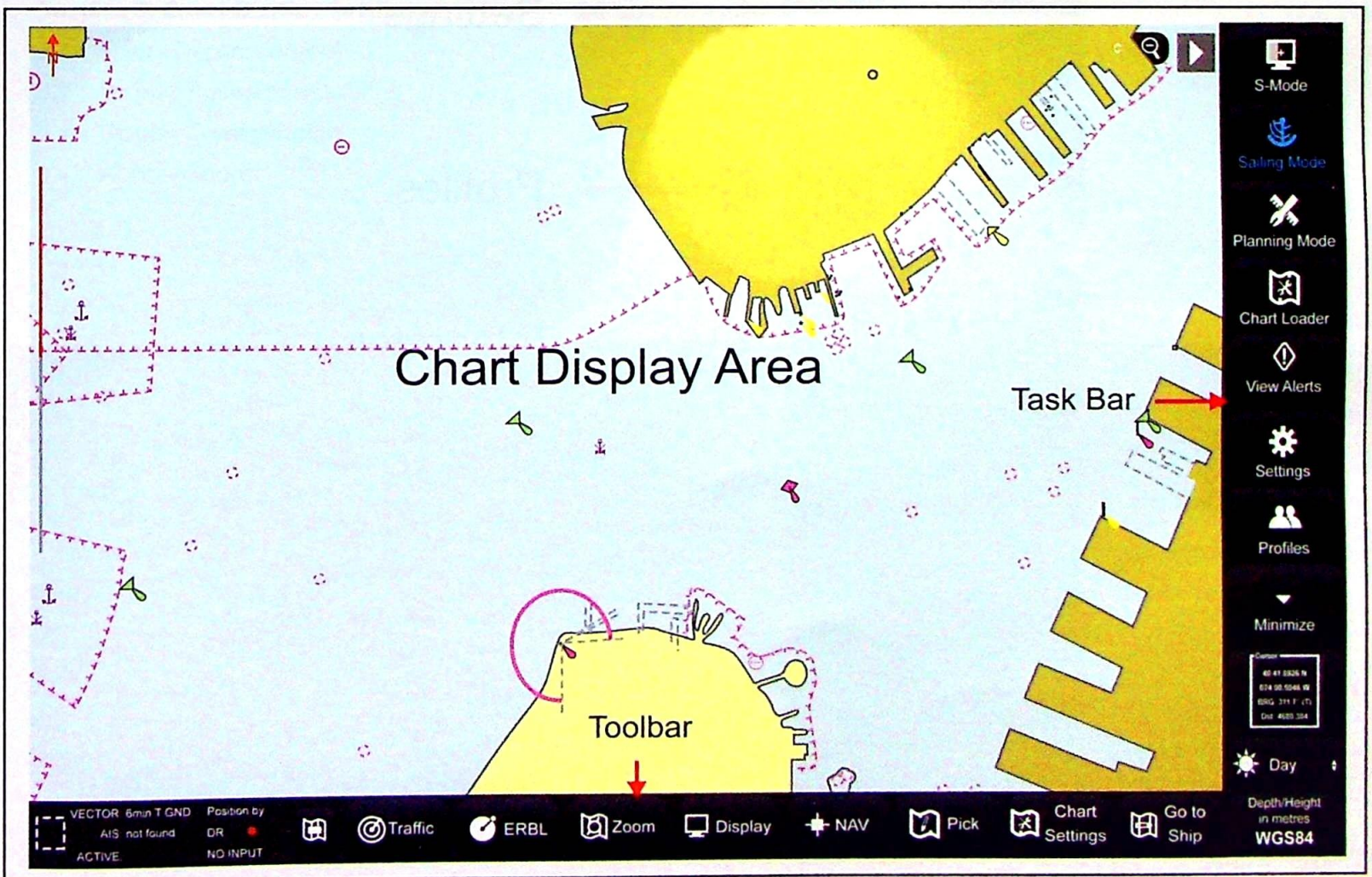
Locate the system's operator's user guide for referencing and help.

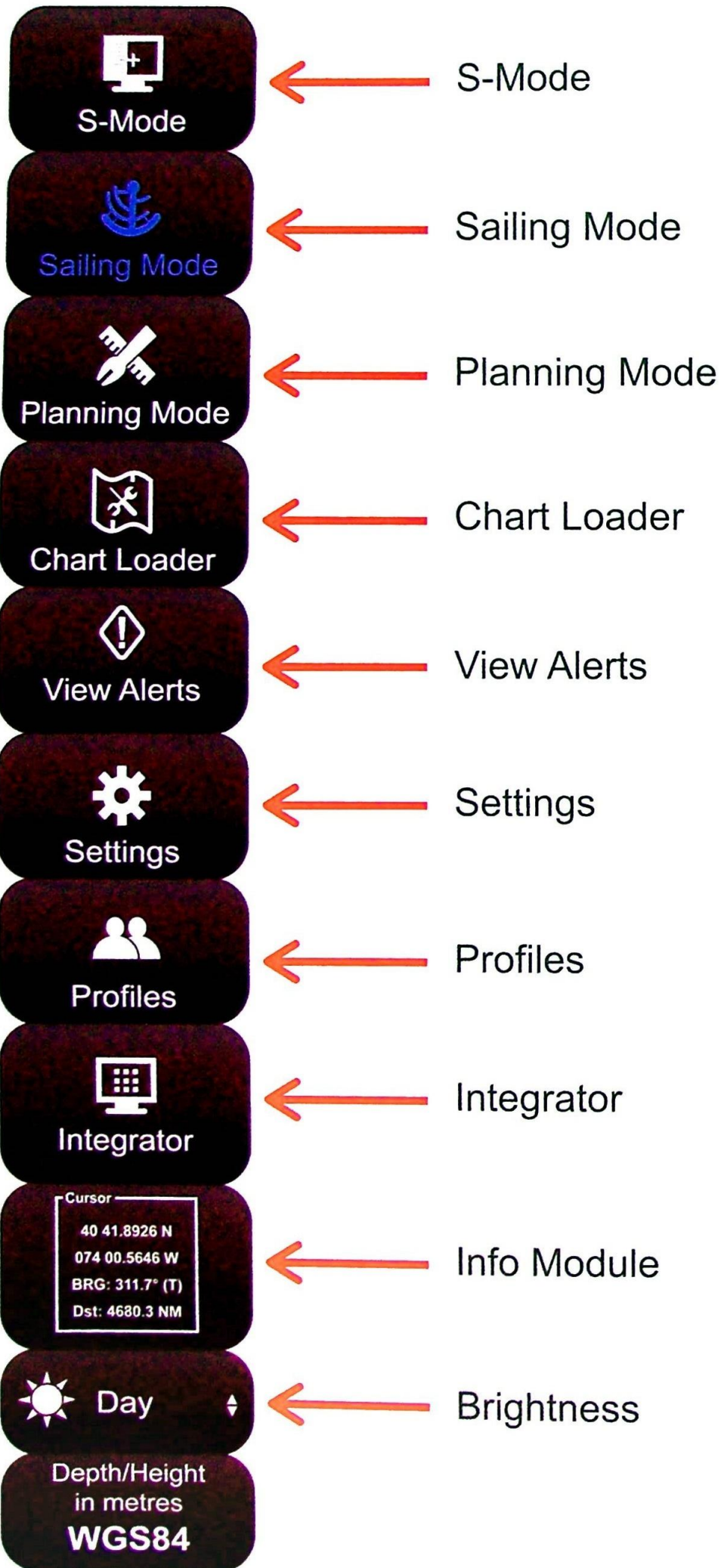
Hard copy of Operator's Manual only available	

eGlobe G2

Key eGlobe G2 ECDIS Menu Functions

1.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	Integrator Start-up screen>Services Menu
2.	View list of installed Charts	Task Bar>Chart Loader>Inventory>S-57
3.	View the latest update number installed	Task Bar>Chart Loader>Inventory>S-57 Toolbar>Pick>Legend>Item
4.	Change Chart Settings	Toolbar>Chart Settings>Chart Display
5.	View information on charted objects and view additional text	Toolbar>Pick>Objects
6.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Toolbar>Nav>Anti-grounding
7.	Input a User Chart Object	Task Bar>Planning Mode>User charts
8.	Input a Manual Update	Task Bar>Chart Loader>Inventory>S-57>Select Chart>Right click chart>Manual Updates
9.	Turn the Predictor on	Toolbar>Nav>Own Ship
10.	Configure the Antigrounding	Toolbar>Nav>Antigrounding
11.	Configure Ship's Track	Toolbar>Nav>Own Ship
12.	Configure Velocity Vectors	Toolbar>Nav>Own Ship
13.	View past Alarms and Warnings	Task Bar>View Alerts
14.	Input a Visual or Radar Fix	Context menu (right click)>Plot LOP
15.	Turn on Overlays (AIS, ARPA)	Toolbar>Traffic

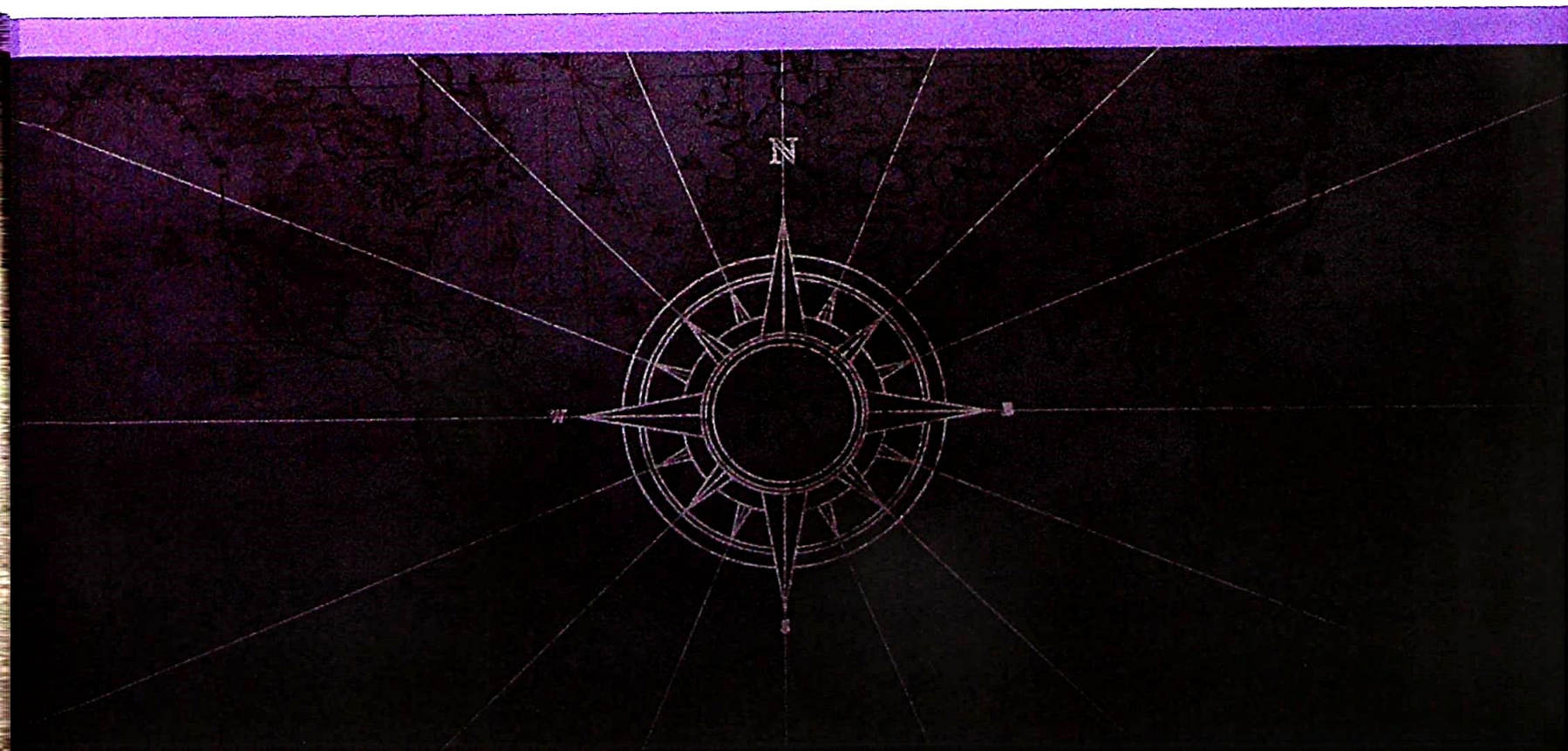




ChartWorld

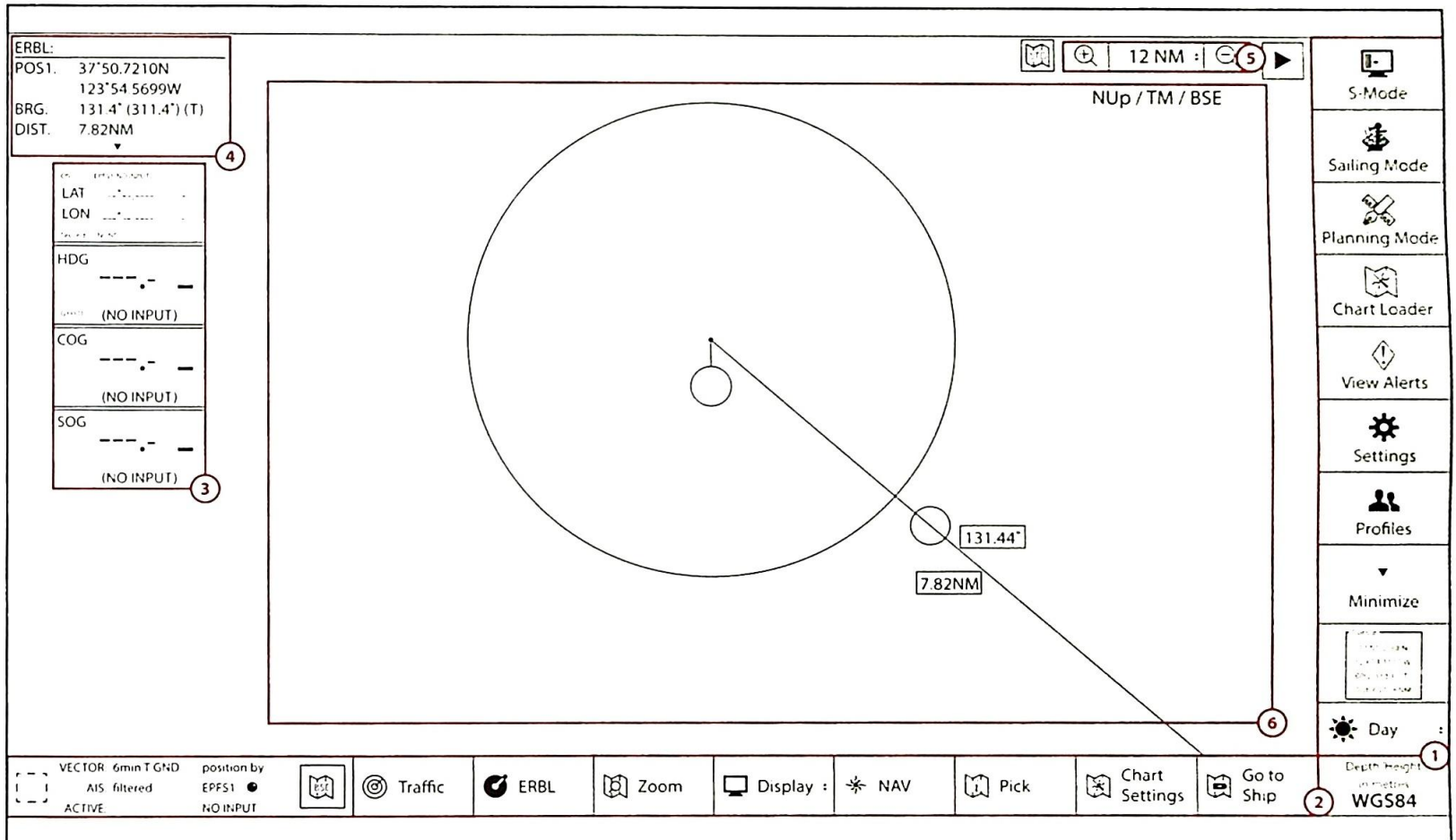
eGlobe G2 ECDIS

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Section 1: Main Display

1.1 Screen Layout



1 Task bar

3 Information labels

5 Range widget

2 Toolbar

4 ERBL onscreen information

6 Chart display panel

1.2 Colour Palette/Profiles

				S-Mode
Default profile	Open Water			Sailing Mode
				Planning Mode
				Chart Loader
				View Alerts
				Settings
				Profiles 4
				Day
				Dusk
				Night 2
				Day 1
VECTOR: Amplitude position by AIS: Extended EFFS1 ● ACTIVE NO INPUT				Save as Profile 5 Delete Go to Ship Depth/Height in metres WGS84

1 Click the brightness icon in the task bar.

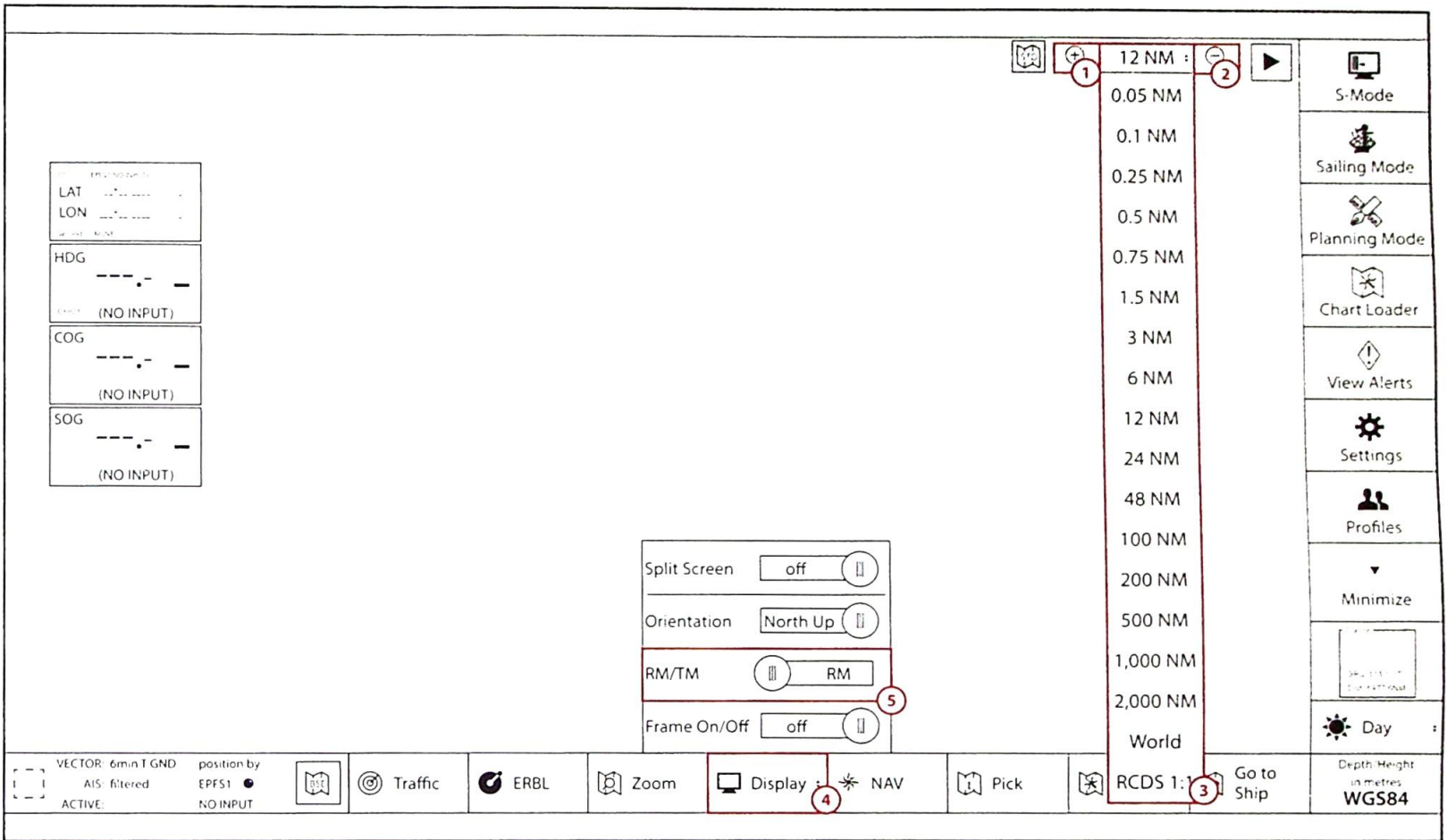
2 Select day, dusk or night.

3 Information labels.

4 Select the profile required.

5 'Save as Profile' ensures current settings are saved.

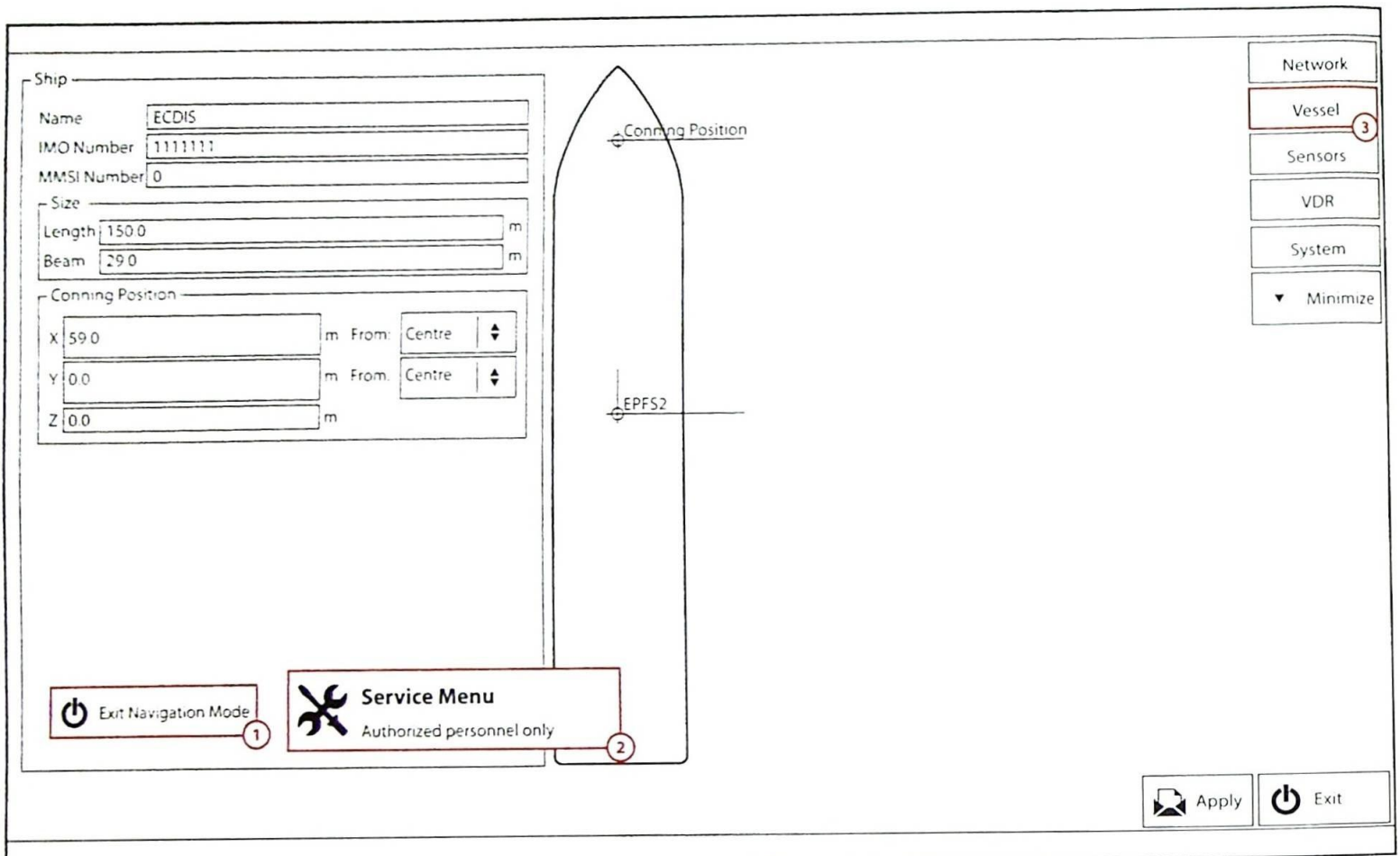
1.3 Range/Scale/Motion



- 1 Click to zoom in.
- 2 Click to zoom out.
- 3 Left click to access the dropdown and selected range.

- 4 Select 'Display' to view the display menu.
- 5 Click here to switch between RM and TM.

1.4 Setting CCRP

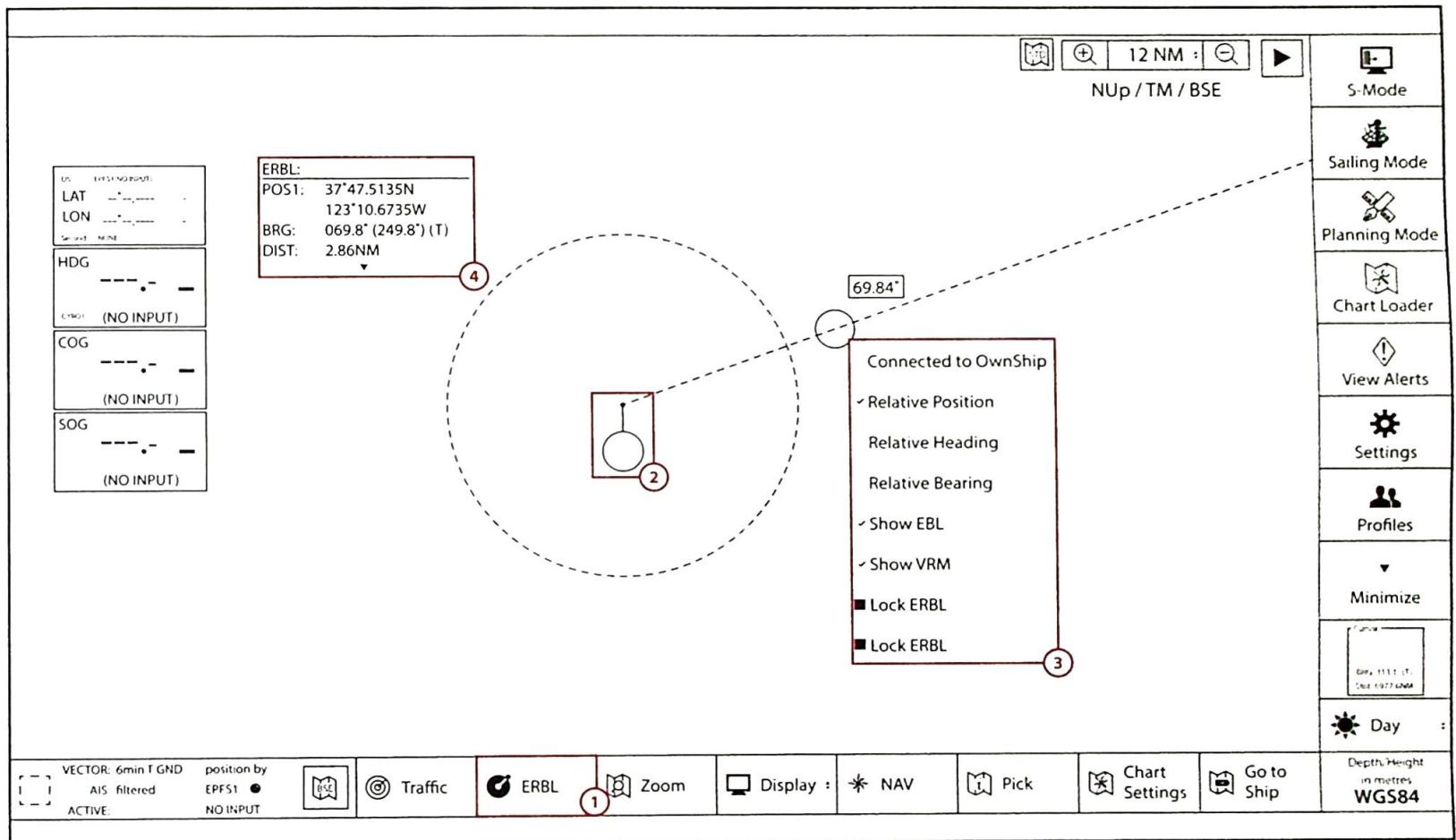


Note to user: To find CCRP settings, you must exit 'ECDIS Mode' and enter the 'Service Menu'.

- 1 Click 'Exit Navigation Mode' from settings.
- 2 From the integrator screen, click 'Service Menu'.
- 3 Click 'Vessel' to open CCRP settings.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



- 1** Click 'ERBL' to turn on.
- 3** Right click to access the context menu.
- 4** ERBL onscreen information.
- 2** Left click the handle to move.

2.2 Manual Corrections Part 1

The screenshot shows the ECDIS software interface. At the top right, there are navigation icons and a scale of 0.25 NM. On the right side, there is a vertical task bar with icons for S-Mode, Sailing Mode, Planning Mode, Chart Loader (1), View Alerts, Settings, Profiles, Minimize, and Day. The main window has a menu bar with options: Install, Inventory (2), Report, Settings, Review Updates, Manual Updates, Chart 1, and NAVTEX. Below the menu bar, there is a table of charts with columns: Name, Status, Product, Producer, Installed edition, Installed update, Update Date, Latest Edition available, Latest Update available, and Expiry. The table contains several rows of chart data. A context menu is open over the row for US6RI26M, with options: Select all expired chart, Clear selection, Show this chart, License (Licensed, Not licensed), Review updates, and Manual updates (4). At the bottom, there is a toolbar with icons for Edit (4), Undo, Redo, Select, Deselect, Pick, Chart Settings, and Go to Ship. The bottom right corner shows 'Depth/Height in metres WGS84'.

Name	Status	Product	Producer	Installed edition	Installed update	Update Date	Latest Edition available	Latest Update available	Expiry
US6WI01M		ENC	US	1	0	18.07.2016	1	0	Nev
US6SP10M		ENC	US	2	0	25.09.2013	2	0	Nev
US6RI26M		ENC	US	4	1	15.10.2013	4	1	Nev
US6PR13M		C	US	4	0	20.01.2015	4	0	NC
US6MI71M		C	US	1	0	12.08.2016	1	0	Nev
US6MI69M		C	US	5	0	20.09.2016	5	0	Nev

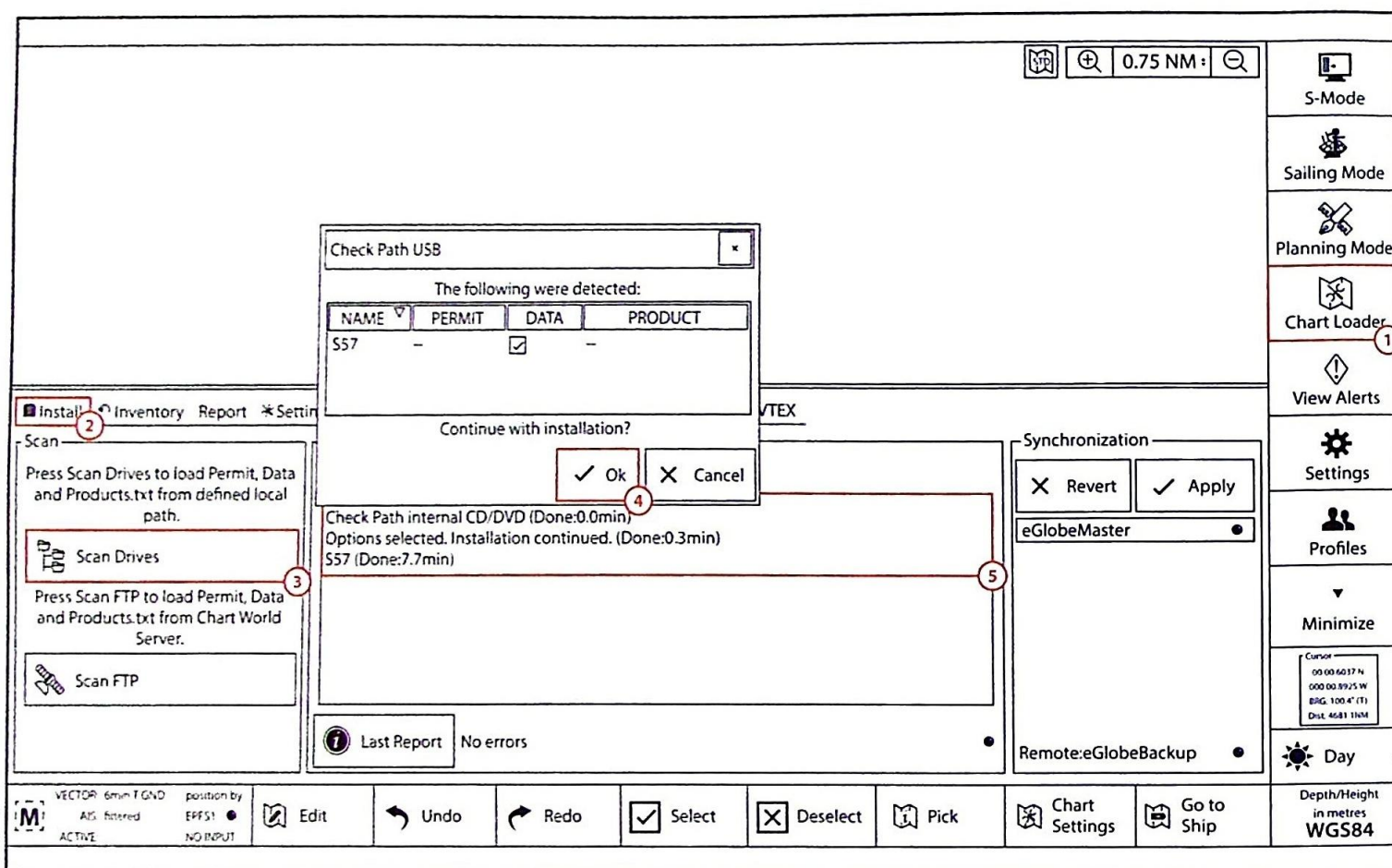
1 Click 'Chart Loader' in the task bar.

3 Select the chart to be updated and right click to view the context menu.

4 Click 'Manual updates'.

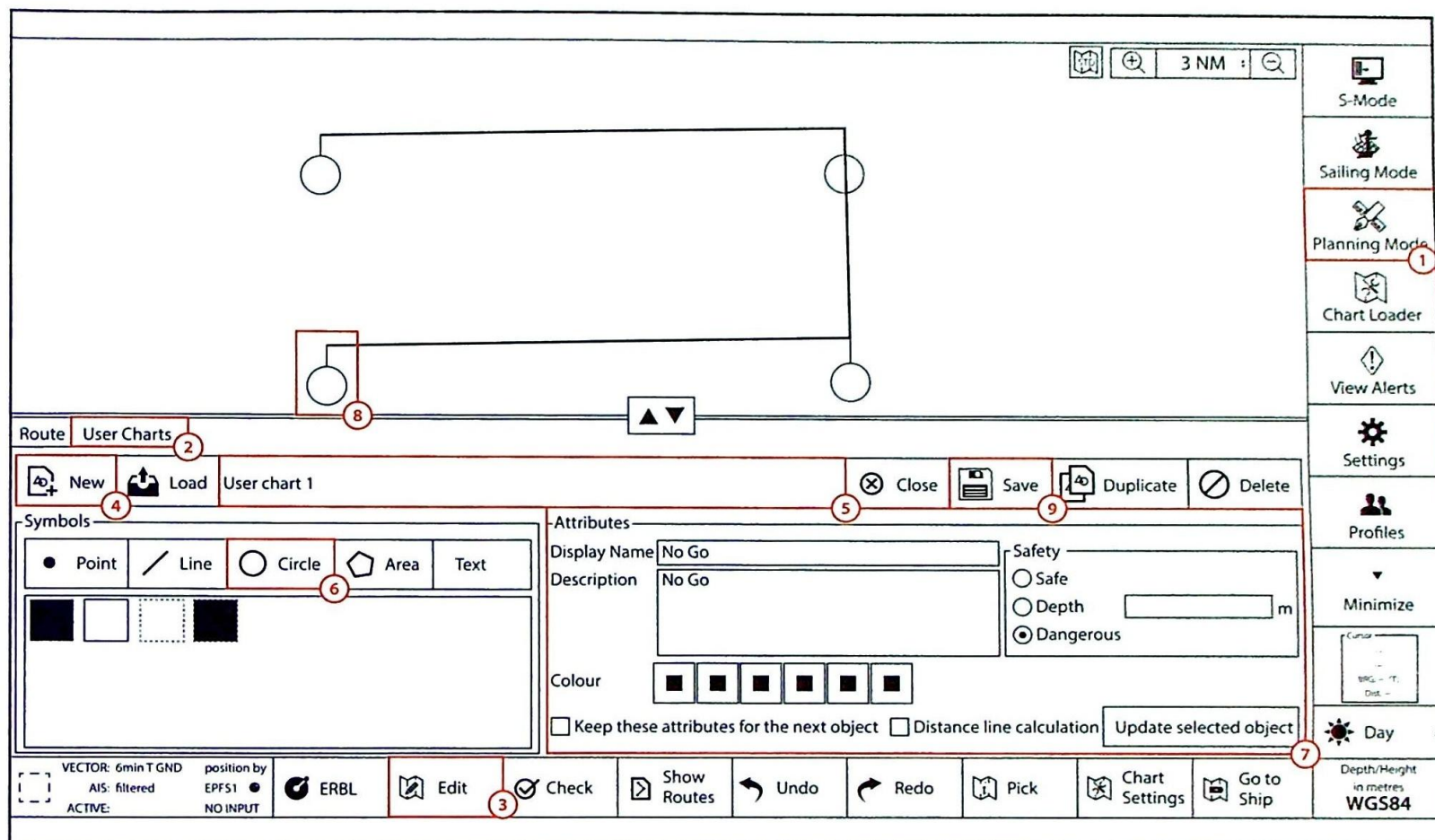
2 Click 'Inventory'.

2.3 Chart Updates



- 1 Click 'Chart Loader' in the task bar.
- 2 Click 'Install'.
- 3 Click 'Scan Drives'.
- 4 Once the scan has been completed, it will show the charts that can be installed. Click 'Ok' to start the installation.
- 5 Show stages of the installation.

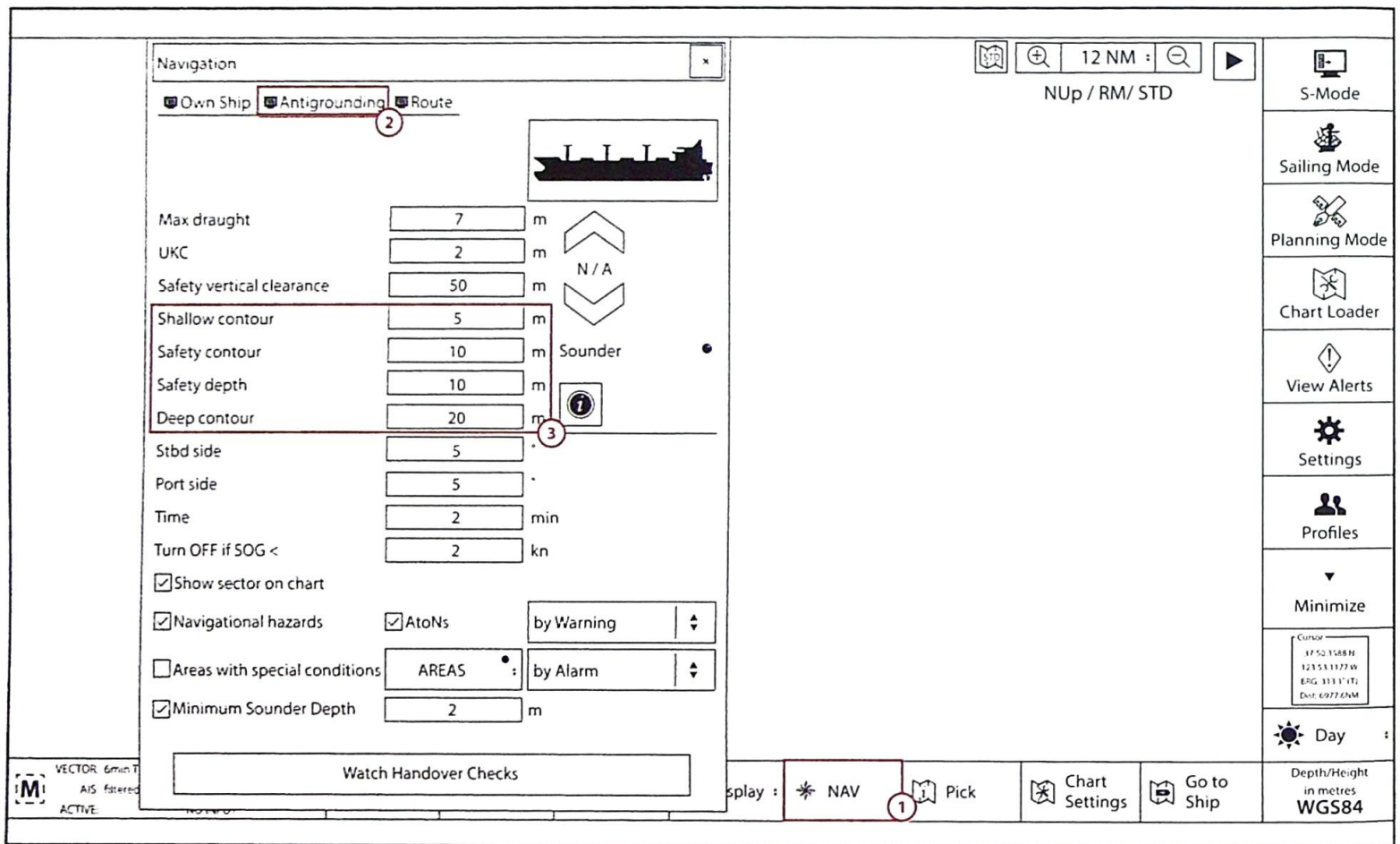
2.4 No Go Areas/User Charts



- 1 Click 'Planning Mode' in the task bar.
- 2 Click 'User Charts'.
- 3 Ensure 'Edit' is enabled.
- 4 Select 'New'.
- 5 Enter a name for the user chart.
- 6 Select the symbol to be added.
- 7 Add attributes to the symbol.
- 8 Left click on the chart to start adding objects.
- 9 Click 'Save' to save the user chart.

Section 3: Chart Display Settings

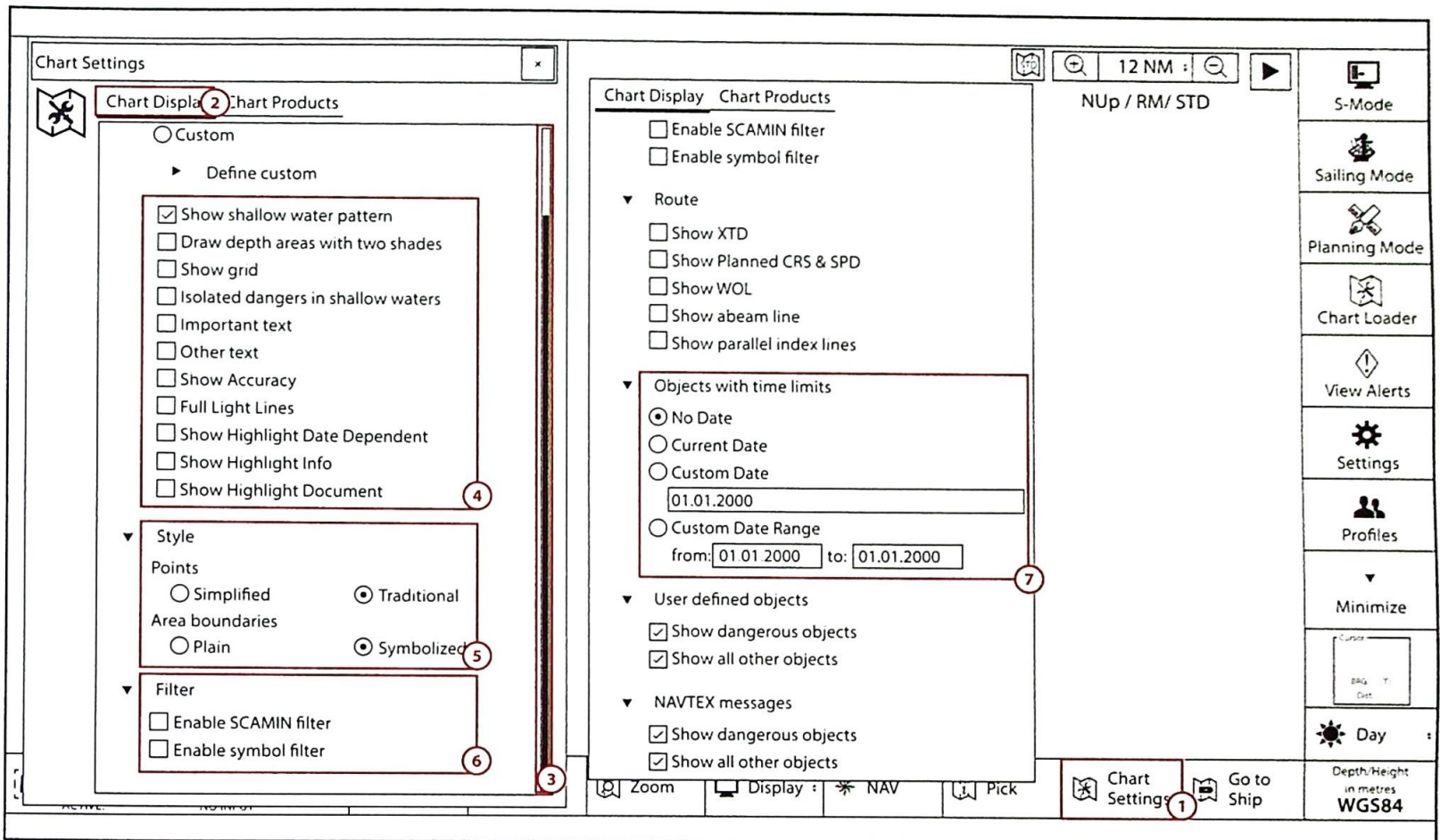
3.1 Safety Depth/Contour



- 1 Click 'NAV' in the toolbar.
- 2 Click 'Antigrounding' in the navigation menu.

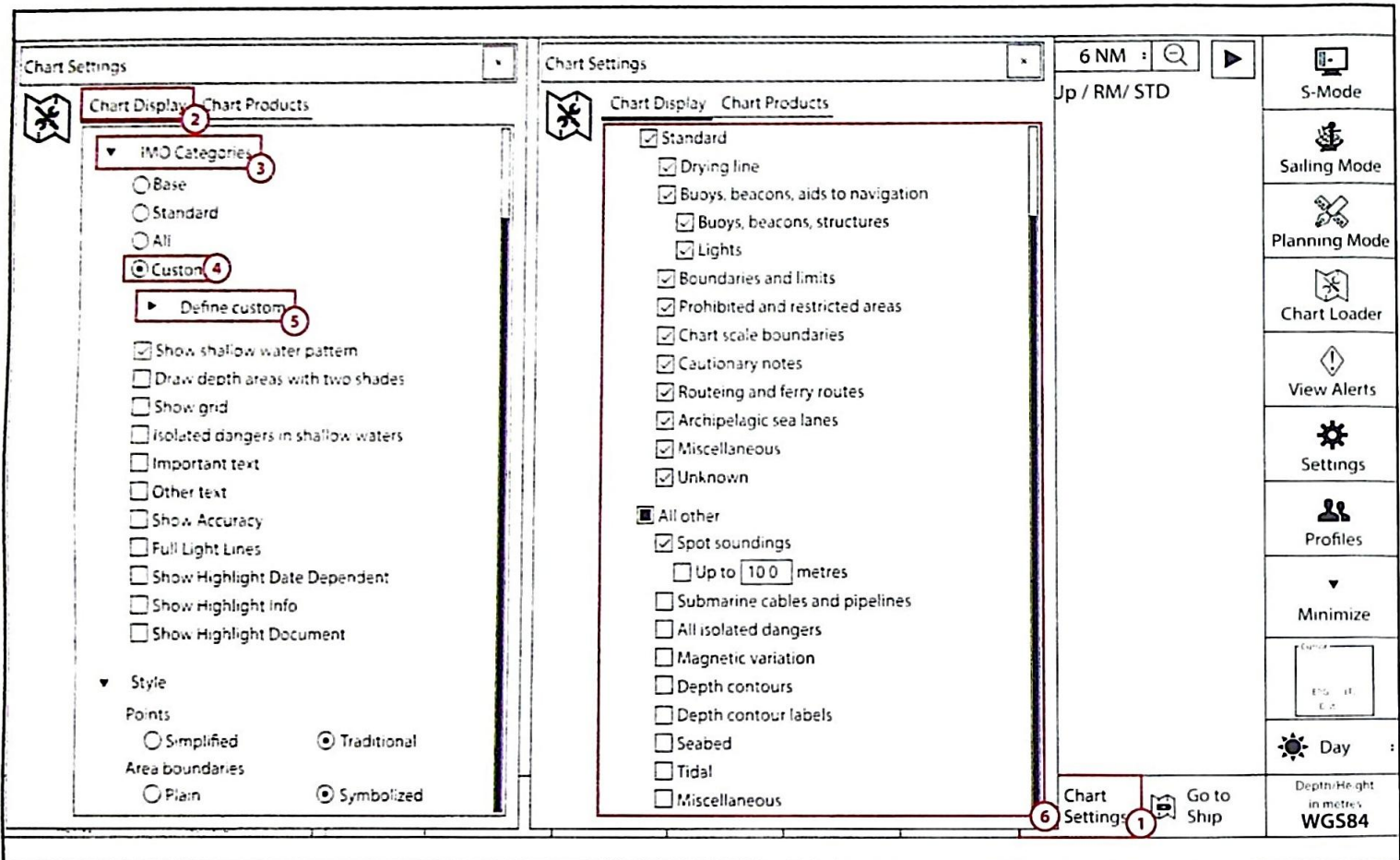
- 3 Adjust contours, as required.

3.2 Display Preference Options



- 1 Click 'Chart Settings' in the toolbar.
- 2 Click 'Chart Display'.
- 3 Use the scroll bar to find the settings required.
- 4 Under 'Define custom' within IMO Categories, enable/disable as required.
- 5 Under 'Style', enable/disable as required.
- 6 Under 'Filter', enable/disable as required.
- 7 Under 'Objects with time limits', enable/disable as required.

3.3 Display Configuration



1 Click 'Chart Settings' in the toolbar.

2 Click 'Chart Display'.

3 Expand 'IMO Categories'.

4 Select 'Custom'.

5 Expand 'Define custom'.

6 Enable/disable by ticking or unticking.

3.4 Abbreviations

Time	18:05:12	00:00 W
OS:	DR (1) NPUT)	
LAT	---	
LON	---	
Secom	EPFS (4) ---m	
HOG	---	
GYRO	(NO INPUT)	
STW	---	
DLOG	(NO INPUT)	
DEPTH	---	
BELOW KEEL	(NO INPUT)	
CMG	---	
DR	(NO INPUT)	
SPD	---	
DLOG	(NO INPUT)	
SMG	---	
DR	(NO INPUT)	
ROT	---	
GYRO	(NO INPUT)	
Next WP	---	
CRS	Next CTS:	
DTW	BTW:	
XTD	---	
ETA	---	
TTG	---	
XTD	---	m
ARPA-1	0 Targets	ON
ARPA-2	0 Targets	ON
AIS	8 Targets	ON
Filter		
CPA	1.00	NM
TCPA	10	min

ERBL: ECDIS
 POS1: 30°07.9570N
 072°19.4203W
 BRG: 21 132.2° (312.2°) (T)
 DIST: 22 30.08NM

VECTOR 6m/n T GRD position by
 AIS filtered DR ●
 ACTIVE: NO INPUT

Traffic
ERBL
Zoom
Display
NAV
Pick
Chart Settings
Go to Ship

Depth/Height
 in metres
WGS84

- | | | |
|--|-------------------------------------|---|
| 1 Dead Reckoning | 8 Course Made Good | 16 Time to Go |
| 2 Latitude | 9 Speed | 17 Automatic Radar Plotting Aid |
| 3 Longitude | 10 Speed Made Good | 18 Automatic Identification System |
| 4 Electronic Position Fixing System | 11 Rate of Turn | 19 Closest Point of Approach |
| 5 Heading | 12 Waypoints | 20 Time to Closest Point of Approach |
| 6 Speed Through Water | 13 Course | 21 Bearing |
| 7 Digital LOG | 14 Cross Track Distance | 22 Distance |
| | 15 Estimated Time of Arrival | |

Section 4: Route Planning

4.1 Creation

The screenshot shows the ECDIS route planning interface. At the top, there's a chart area with three waypoints connected by a dotted line. Below the chart is a route table with columns for Name, Position, Course from last WP, Distance from last WP, XTD port, XTD stb, Merge XTL, PI port, PI stb, Leg Type, Turning Radius, Safety Check, ETD, and Time of. The table contains three rows for WP 1, WP 2, and WP 3, followed by an 'Add WP' row and a 'Total' row. Below the table is a toolbar with various icons and buttons. On the right side, there's a task bar with icons for S-Mode, Sailing Mode, Planning Mode, Chart Loader, View Alerts, Settings, Profiles, Minimize, and Day. A small window shows coordinates: 25 4506254 N, 052 06 3473 W, EPG 235 9 (T), Dst: 481.1 NM.

Name	Position	Course from last WP [°]	Distance from last WP [NM]	XTD port [m]	XTD stb. [m]	Merge XTL	PI port [NM]	PI stb. [NM]	Leg Type	Turning Radius [m]	Safety Check	ETD	Time of [h]
1 WP 1	25° ...												
2 WP 2	25° ...	259.0	1.0	100.0	100.0	<input type="checkbox"/>			Rhum...	200.0	<input checked="" type="checkbox"/>		
3 WP 3	25° ...	253.3	0.9	100.0	100.0				Rhum...	200.0	<input checked="" type="checkbox"/>		
Total: 1.9													

- 1 Click 'Planning Mode' in the task bar.
- 2 Ensure 'Edit' is enabled.
- 3 Click 'New'.
- 4 Name your route.
- 5 Left click on the chart to place your first waypoint.
- 6 Consecutive left clicks will place more waypoints.
- 7 Waypoints will appear in the route table.
- 8 Click 'Save'.

4.2 Schedule/Route Checking

Check Route & Planning Mode Settings

Route Name: New Route (1)
 Check Status: Dangers
 Check Date: 01.06 2009 20:18 (00:00 W)
 Safety Contour used: 10.00m
 Safety vert. clearance used: 50.00m

Use global values

Safety vertical clearance: 50.00 m
 Shallow Contour: 5.00 m
 Safety Contour: 10.00 m
 Safety Depth: 10.00 m
 Deep Contour: 20.00 m

AtoNs
 Areas with special conditions AREAS
 Use double XTD

Check Route

Leg Type	Turning Radius [m]	Safety Check	ETD	Time of [h]
hum...	200.0	■		
um...	200.0	■		

Route User Charts

New Load New Route

	Name	Position	Course from last WP [°]	Dist. last
1	WP 1	25° ...		
2	WP 2	25° ...	248.6	
3	WP 3	25° ...	250.4	
4	Add WP			

VECTOR: 6min T GND position by DR
 AIS: filtered ACTIVE: NO INPUT

ERBL Edit Check Show Routes Undo Redo Pick Chart Settings Go to Ship

S-Mode Sailing Mode Planning Mode Chart Loader View Alerts Settings Profiles Minimize Day

Depth/Height in metres WGS84

Note to user: eGlobe G2 automatically checks the route as soon as waypoints are placed.

- 1 Click 'Check' in the toolbar.
- 2 Configure settings for route check.
- 3 Click 'Check Route'.
- 4 Show safety status of the leg.
- 5 Highlight dangers/warnings.

4.3 Optimisation

Route User Charts

12 NM

S-Mode
Sailing Mode
Planning Mode
Chart Loader
View Alerts
Settings
Profiles
Minimize
Day
Depth/Height in metres WGS84

Leg	XTL	Port [NM]	Stb. [NM]	Leg Type	Turning Radius [m]	ETD	Time of stay [h]	Planned Speed [kn]	Time to go	ETA	Time Zone [h from UTC]	Total time to go
1						01.01.2020 00:00					00:00 W	
2	<input checked="" type="checkbox"/>			Rhum...	200.0	01.01.2020 02:06		15.0	02:06	01.01.2020 02:06	00:00 W	02:06
3	<input type="checkbox"/>			Rhum...	200.0	01.01.2020 02:11		15.0	00:05	01.01.2020 02:11	00:00 W	02:11
4	<input type="checkbox"/>			Rhum...	200.0	01.01.2020 02:17		15.0	00:06	01.01.2020 02:17	00:00 W	02:18
5	<input type="checkbox"/>			Rhum...	200.0			15.0	00:06	01.01.2020 02:23	00:00 W	02:24

VECTOR, 6min T GND
 AIS filtered
 ACTIVE

position by DR ERBL Edit Check Show Routes

1 Ensure you are editing a route and that you have some waypoints inserted.

2 Insert an ETD.

3 Adjust speed for each leg of the route, as required.

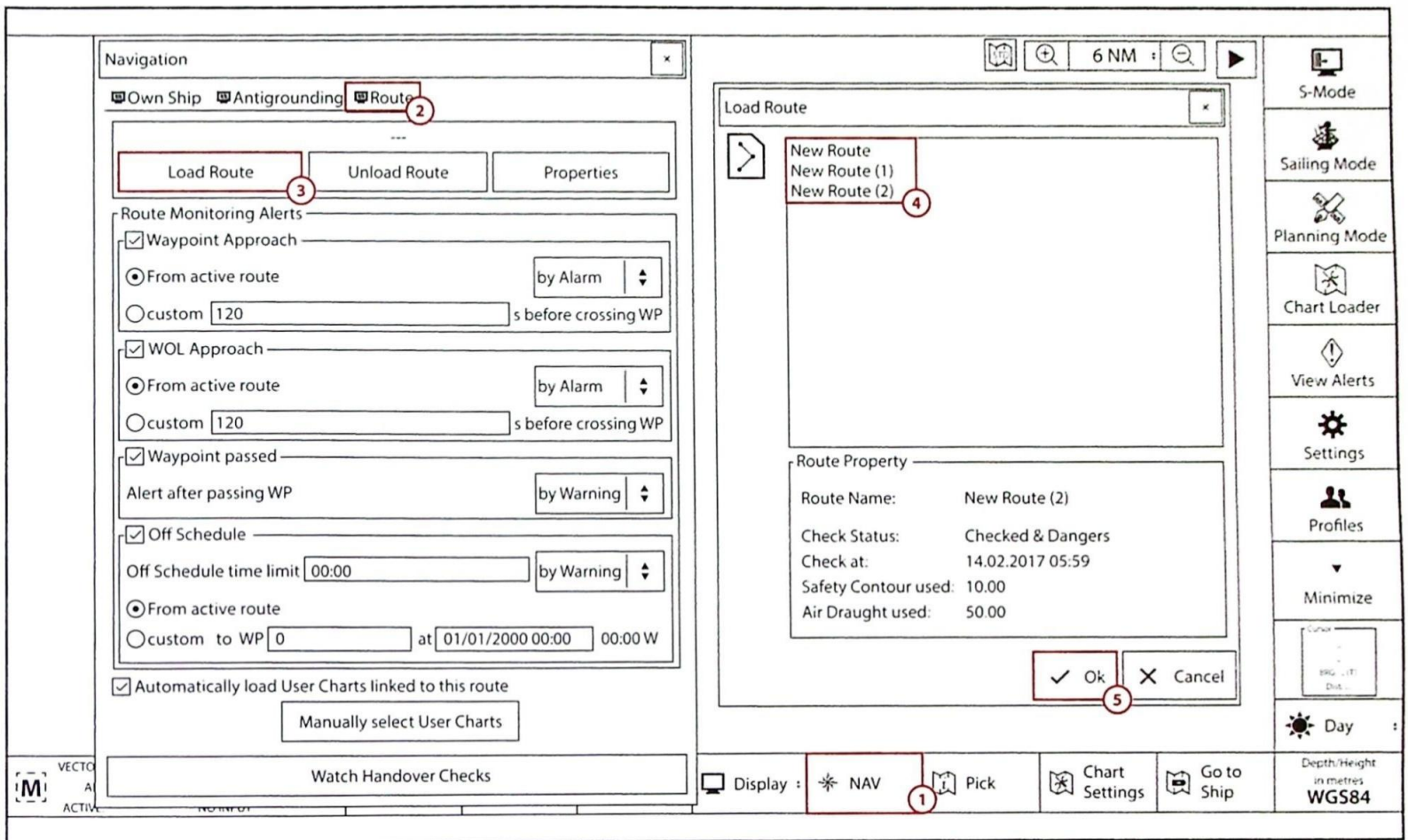
4 Adjust ETA for each leg of the route.

5 Insert the time zone accordingly.

6 TTG will automatically change based on the details inserted into the route table.

7 Click 'Save' to ensure your changes have been saved.

4.4 Selecting Active Route



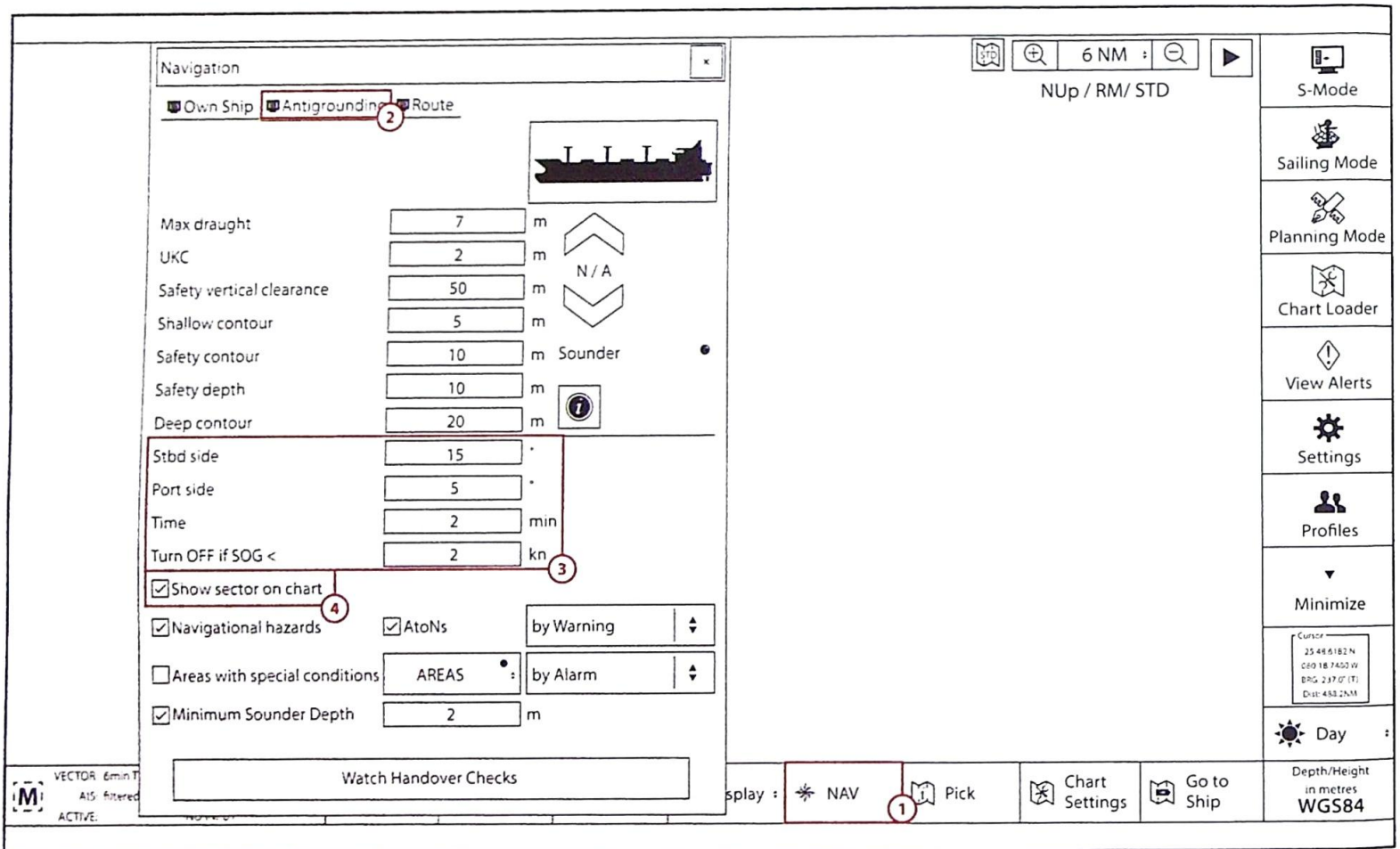
- 1 Click 'NAV' in the toolbar.
- 2 Click 'Route' in the navigation menu.

- 3 Click 'Load Route'.
- 4 Select a route.

- 5 Click 'Ok' to load the route.

Section 5: Route Monitoring

5.1 Look-Ahead



- 1 Click 'NAV' in the toolbar.
- 2 Click 'Antigrounding' in the navigation menu.
- 3 Adjust look-ahead settings.
- 4 Click the tick box to show the sector on the chart.

5.2 TT/AIS/Vectors Part 1

The screenshot displays the ECDIS interface with the Traffic Settings dialog box open. The dialog box is titled "Traffic Settings" and contains several sections:

- Targets:** ARPA1 (on), ARPA2 (on), AIS (on). Below this, it shows "0 targets", "0 targets", and "8 targets".
- ARPA Targets:** Includes checkboxes for "Show ID", "Show ARPA ERBL", and "Show ARPA Cursor". There is also a checked box for "Target Past Positions" and a "Trails length" field set to "1 min".
- AIS Targets:** Includes checked boxes for "Show names of targets" and "Hide sleeping AIS targets outside range of 20.0 NM". The "Activation Range" is set to "10 NM".
- Targets Association:** Includes radio buttons for "OFF", "ON (AIS target display)", and "ON (ARPA target display)".
- Alerts / Warnings:** Includes checked boxes for "Lost AIS Target" and "Lost ARPA Target if closer than 5.0 NM". There is also a checked box for "CPA/TCPA" with fields for "CPA 1.0 NM" and "TCPA 10 min".

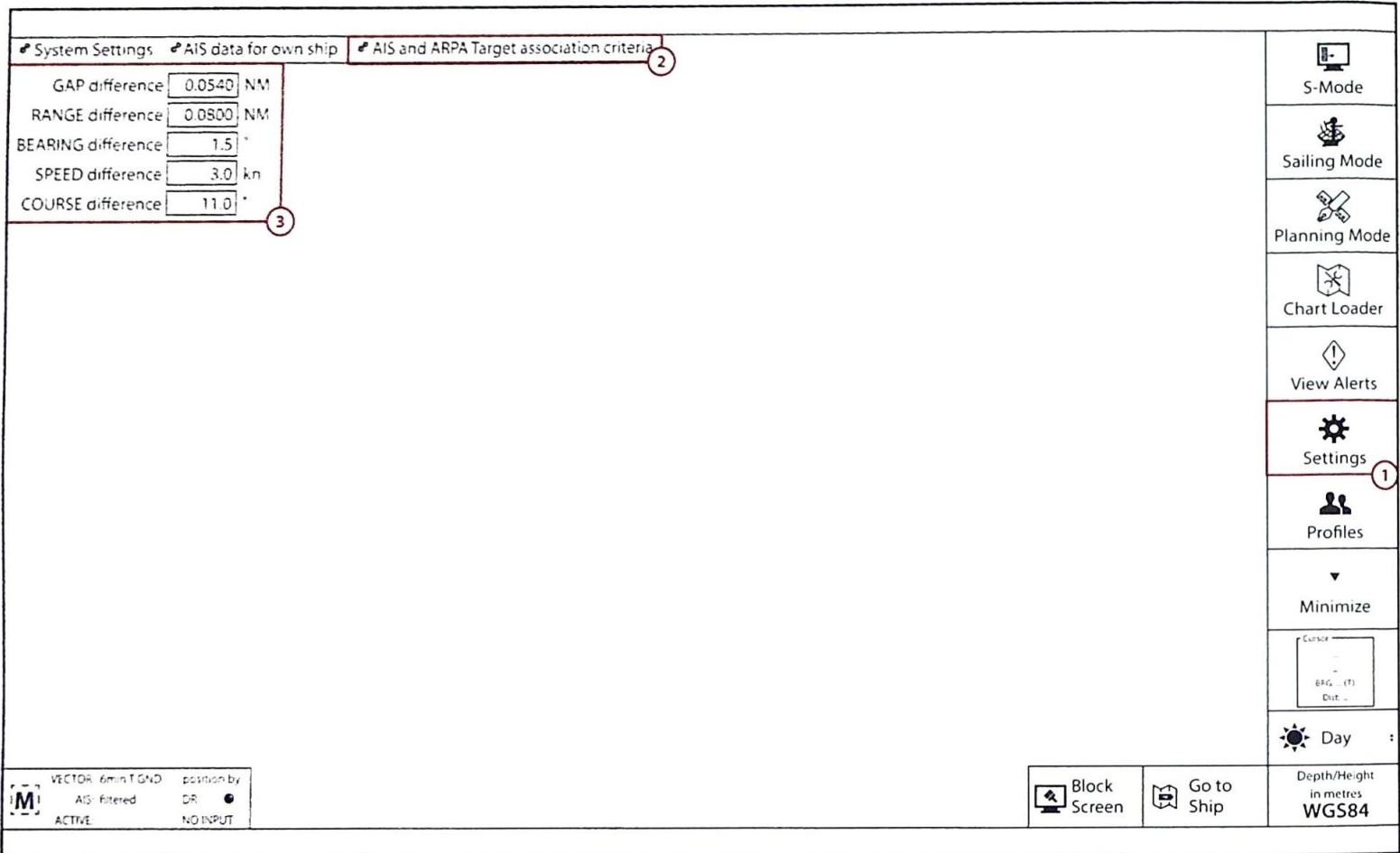
The main toolbar at the bottom of the interface includes buttons for "Traffic" (circled 1), "ERBL", "Zoom", "Display", "NAV", "Pick", "Chart Settings", and "Go to Ship". A red box highlights the "Traffic" button with a circled "1". Another red box highlights the "on" buttons for ARPA1, ARPA2, and AIS in the Traffic Settings dialog with a circled "2". A third red box highlights the "Lost AIS Target" and "Lost ARPA Target" checkboxes in the Alerts / Warnings section of the dialog with a circled "3".

1 Click 'Traffic' in the toolbar.

2 Enable/disable, as required.

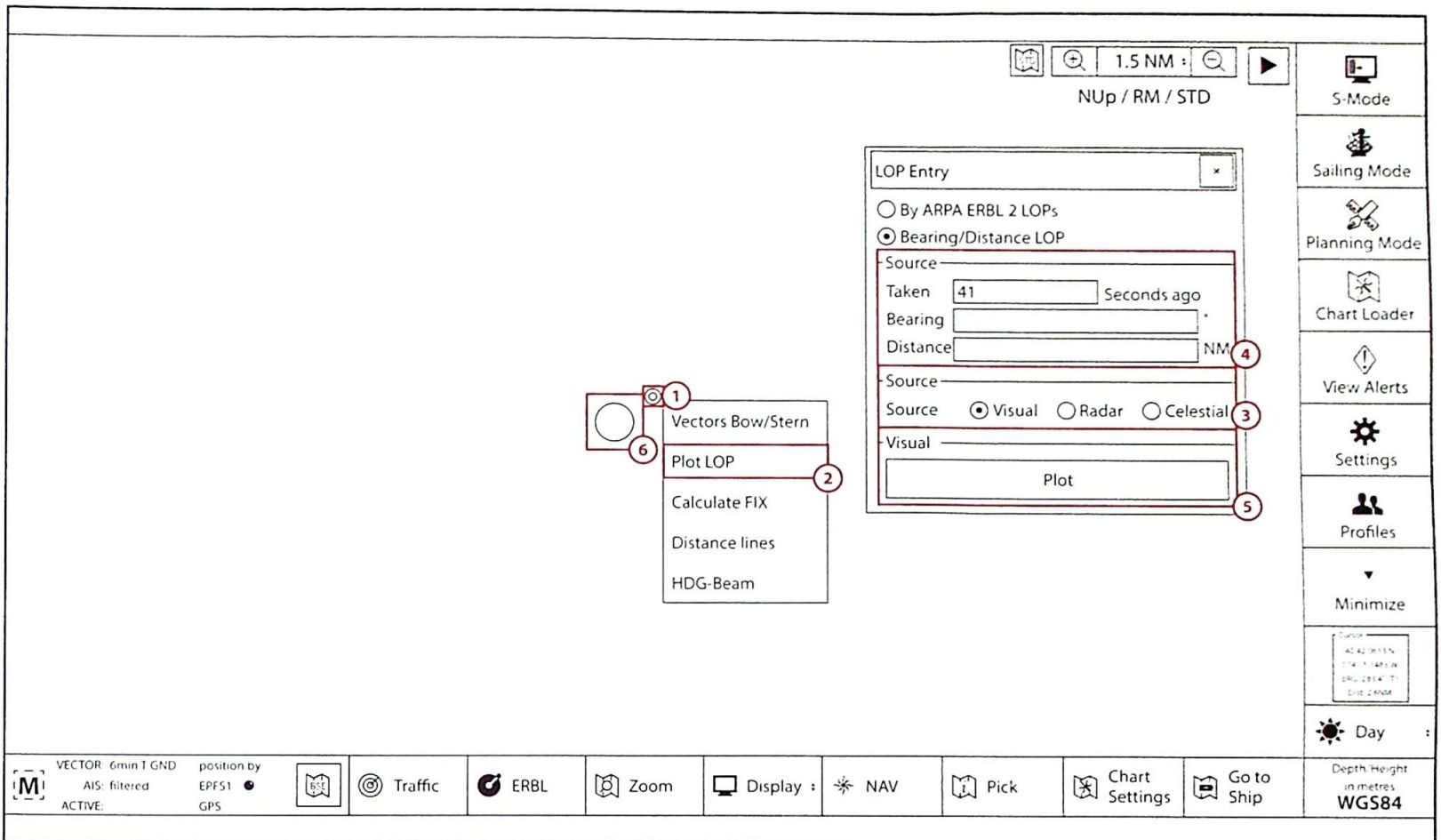
3 Adjust settings, as required.

5.2 TT/AIS/Vectors Part 2



- 1 Click 'Settings' in the task bar.
- 2 Click 'AIS and ARPA Target association criteria'.
- 3 Adjust settings, as required.

5.3 Position Fixing

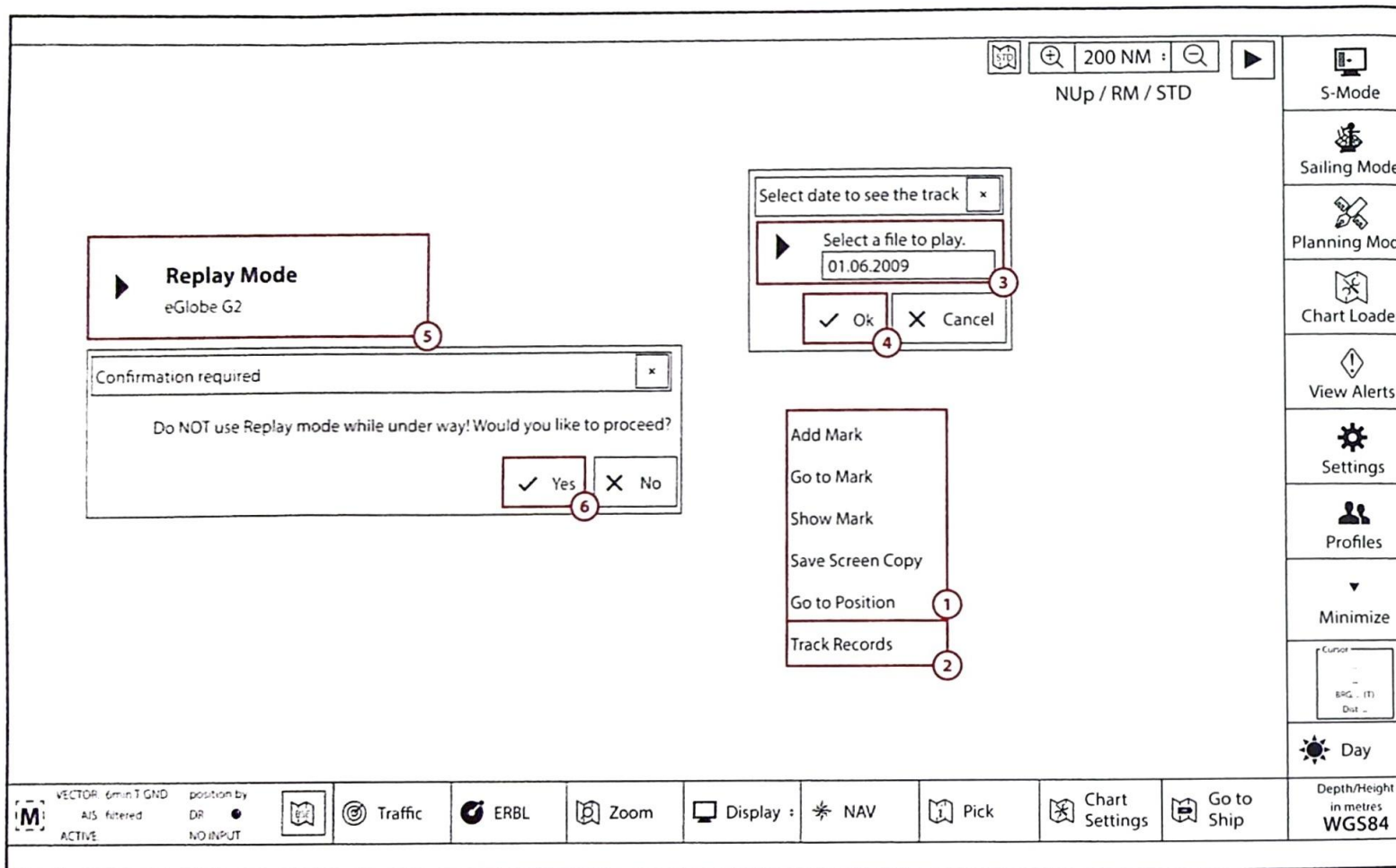


- 1 Right click on own vessel to view the context menu.
- 2 Click 'Plot LOP'.
- 3 Under the 'Source' heading select visual, radar or celestial.

- 4 Enter bearing/distance.
- 5 Click 'Plot'.
- 6 Using the handle, adjust the bearing to match the object.

- a Repeat steps 1 to 6 two more times to get three LOPs.
- b The system will do a fix automatically.

5.4 Logs/Playback



1 Right click on the chart to view the context menu.

2 Click 'Track Records'.

3 Select a date.

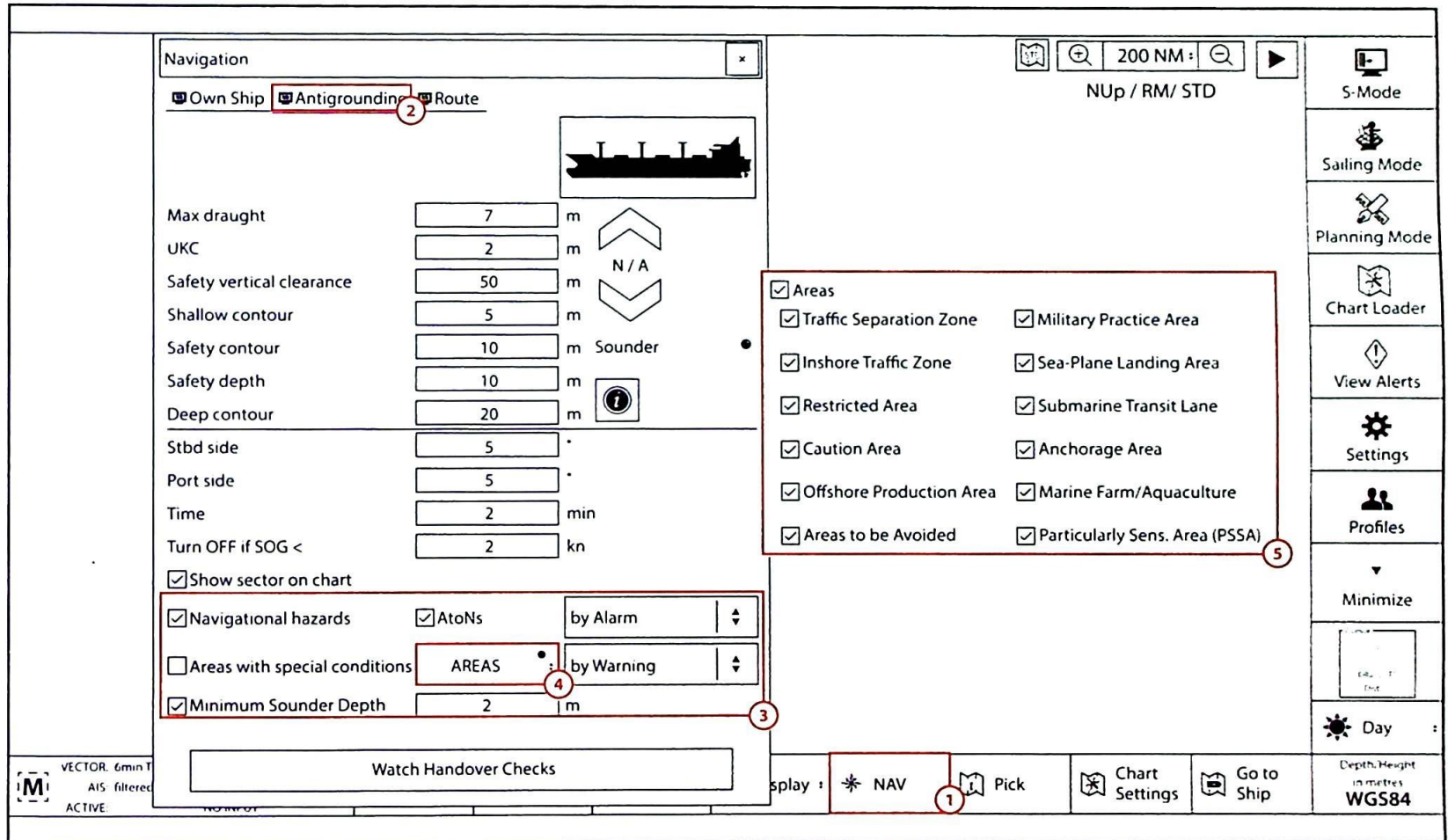
4 Click 'Ok' to load past track.

5 To enter 'Replay Mode', you need to exit 'Navigation Mode', go to the integrator screen and click 'Replay Mode'.

6 Click 'Yes' to start 'Replay Mode'.

Section 6: System Settings

6.1 Warning/Alarm Configuration



- 1 Click 'NAV' in the toolbar.
- 2 Click 'Antigrounding' in the navigation menu.

- 3 Adjust, as required.
- 4 Left click 'AREAS'.

- 5 Use tick boxes to turn on/off, as required.

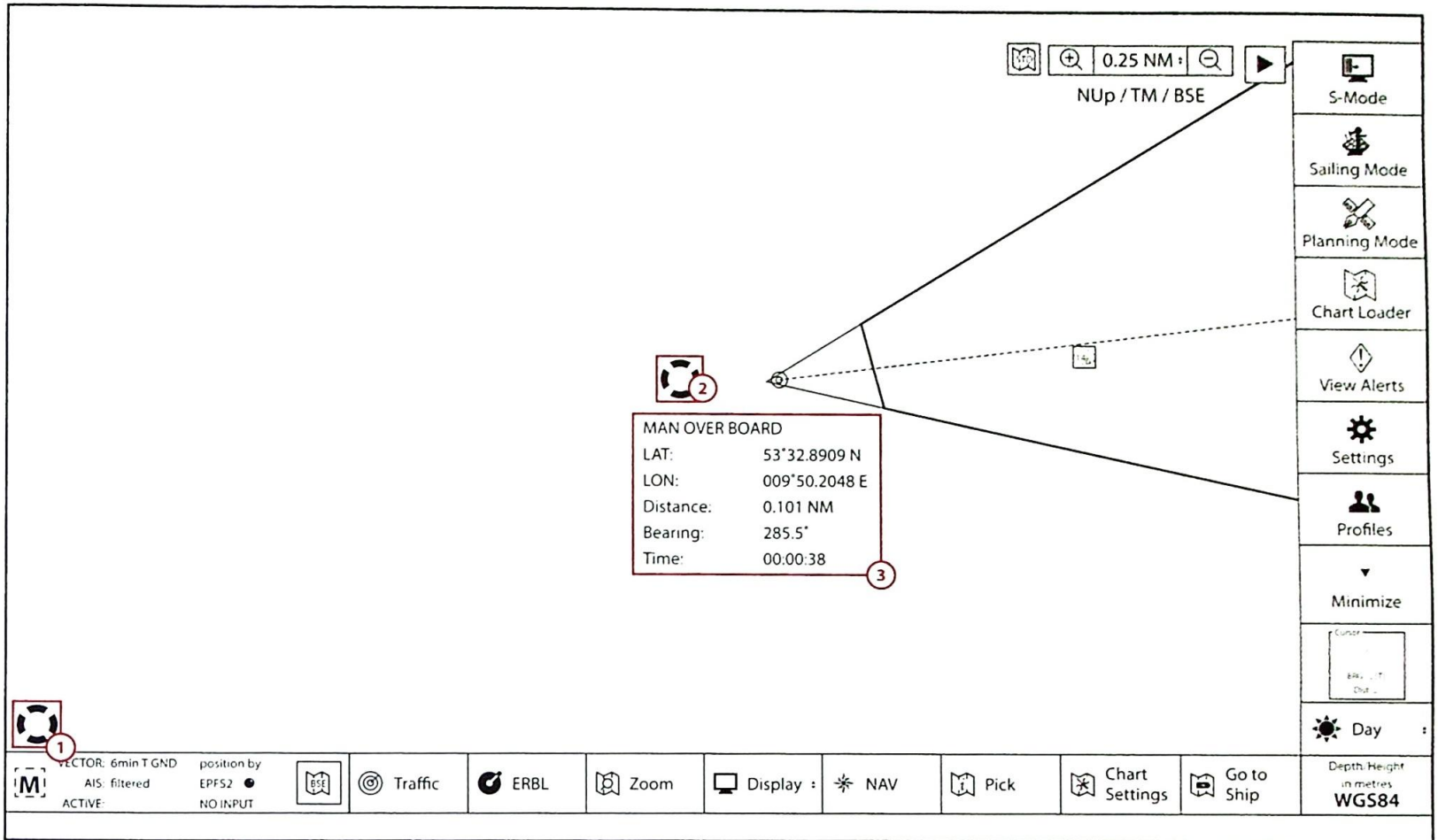
6.2 Position/Heading/Speed

The screenshot displays the ECDIS interface for Position/Heading/Speed. The main window is divided into several panels:

- Navigation Panel:**
 - Tabs: Own Ship (2), Antigrounding, Route.
 - Buttons: Main Position, Secondary Position, Display SP.
 - EPFS1, EPFS2, DR, ER: Each has a Settings button (4).
 - Discrepancy: max UP to 50 m.
 - Heading: GYRO1, GYRO2.
 - Speed LOG: LOG, ARPA1.
 - Own ship symbol: Symbol dropdown.
 - Speed Vector size: OFF, 6 min.
 - Own Track: OFF.
 - Predictor: OFF.
- Dead Reckoning Panel:**
 - Sensor status: DR.
 - Source: LAT: 37°23'06.81N, LON: 069°58'13.58W.
 - Heading: 0.0, Speed: 0.0.
 - DR position: LAT: 37°23'06.81N, LON: 069°58'13.58W.
 - Status, Last fix applied, RMS.
 - Define by cursor: Set Base Point (5).
- Toolbar:** NAV (1), Pick, Chart Settings, Go to Ship.
- Sidebar:** S-Mode, Sailing Mode, Planning Mode, Chart Loader, View Alerts, Settings, Profiles, Minimize, Day, Depth/Height in metres WGS84.

- 1 Click 'NAV' in the toolbar.
- 2 Click 'Own Ship' in the navigation menu.
- 3 Select main and secondary positions, as required.
- 4 Click 'Settings' to view the dead reckoning menu.
- 5 Click 'Set Base Point' and left click on the chart to update latitude/longitude.

6.3 Emergency Menus



1 Click the MOB button.

2 MOB symbol.

3 MOB information label.

6.4 Manual/About

The screenshot shows the 'System Settings' menu with the following sections and callouts:

- System Settings:** Includes 'AIS data for own ship' and 'AIS and ARPA Target association criteria'.
- Display:** 'Handedness' with 'Left-handed' and 'Right-handed' buttons.
- Input:** 'Use touchscreen settings (to view on screen aids)' and 'Amend cursor symbol with a circle'.
- Brilliance Control:** A slider from 'Dark' to 'bright'.
- Time settings:** 'UTC offset' set to '02:00 E'.
- Wheel Over Line:** 'F-Distance' set to '200 m'.
- System Compliance:** Lists IHO and IMO standards. Callout 4 points to 'IHO Presentation Library version 4.0.2'.
- Software version:** 'Current version: 2.0.0.65', 'SevenCs, EC2007 ECDIS Kernel Version 5.22'. Callout 3 points to this section.
- Toolbar Management:** 'S-Mode', 'Sailing Mode', 'Planning Mode'. Includes checkboxes for Traffic, ERBL, Zoom, Display, NAV, Pick, and Chart Settings.
- Info Labels:** 'Sailing Mode' section with checkboxes for Time, Position, COG, SOG, Heading, Rate of Turn, SPD, STW, Depth, Cross Track Distance, Next Waypoint, and River Monitor.
- Safety Functions:** 'Enable MOB Button'. Callout 5 points to this checkbox.
- License Information:** Fields for System ID, Seednumber, S63 User Permit, and ACRS User Permit.
- Task Bar:** 'Settings' button (Callout 1), 'Exit Navigation Mode', 'Block Screen', and 'Go to Ship' buttons.
- Task Bar (Right):** 'S-Mode', 'Sailing Mode', 'Planning Mode', 'Chart Loader', 'View Alerts', 'Settings' (Callout 1), 'Profiles', 'Integrator', 'Day' mode, and 'Depth/Height in metres WGS84'.

- 1 Click 'Settings' in the task bar.
- 2 Click 'System Settings'.

- 3 Information such as PL version is available here.

- 4 PL version.
- 5 Tick to enable the MOB button.

2. Danelec Marine – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Main Screen Become familiar with the basic chart functionality from the main display.		
	Main Screen		Main Menu
	Zoom Buttons		SHORTCUTS
	Status Bar		VOYAGE
	Indicators		ROUTES
	Notices		LAYERS
	Sensor Panel		TOOLS
	Look-ahead windows		LOG
			NAV DATA
			SETTINGS
			MANUAL
			STANDBY
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	TOOLS		Indicators
	Navigation Calculator		Man overboard (ON/OFF)
	Manual observation		ERBL tool (ON/OFF)
	Parallel indexing		Fixed VRM tool (ON/OFF)
	Print chart		Anchor Watch
	Backup arrangement		Look-ahead panel
	AIS messaging		
	Addressed message (ON/OFF)		
	Parallel index line 1 (ON/OFF)		
	Observation points		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Settings		
	Chart		Own ship motion mode
	Navigational settings		Navigation area
	Chart orientation		Keep best scale (ON/OFF)
	Course-up		
	Relative		
	Inner circle – %		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Routes		
	New		Select Route
	Import		Grounding check

Danelec Marine – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

VOYAGE	Settings
Select Route	Chart
Go to button	Vessel
Reverse route	Primary Position Source
LAYERS	
Chart overlays	RADAR targets
AIS	Navtex
Admiralty information overlay (AIO) (ON/OFF)	

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

NAV DATA	
Chart Library	User charts
Install charts	Manual update
Graphical index (ON/OFF)	History

8. System/Local Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Main Screen	SETTINGS
Sensor Panel	Vessel
	Sensors
	AIS
	AIS velocity vector time marks (ON/OFF)
	Radar targets
	Radar targets velocity vector (ON/OFF)

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

SETTINGS	
Alerts	Lost radar target alert (ON/OFF)
Grounding check	System
Lost AIS target alert (ON/OFF)	Sound (ON/OFF)
Check zone	Areas for which special conditions exist (ON/OFF)

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Settings	
System	SA certificates
On-screen keyboard (ON/OFF)	System information
Units, Date & time	Synchronization
Users	Backup and restore user settings

11. ECDIS Operator's Manual

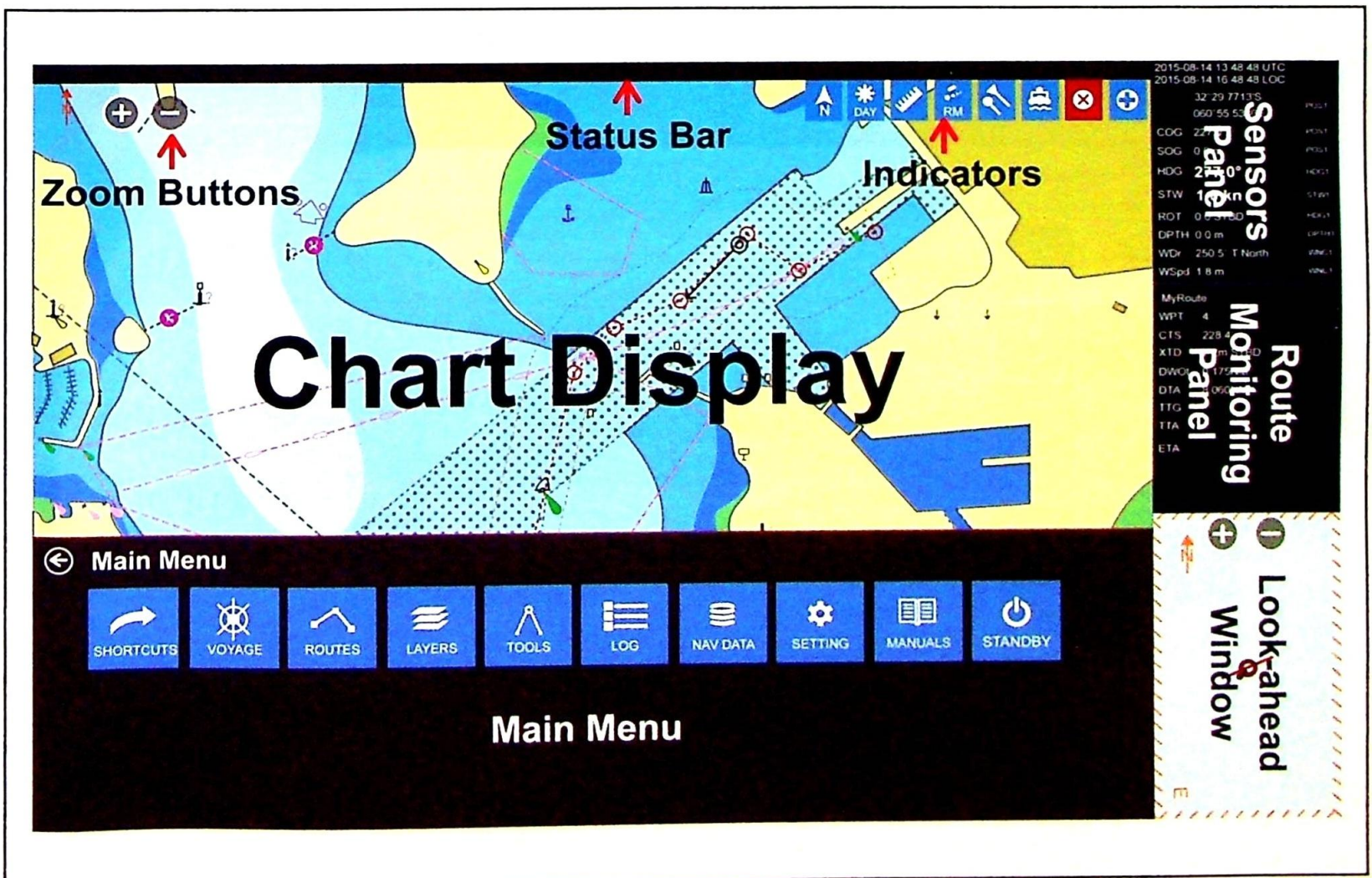
Locate the system's operator's user guide for referencing and help.

Main Menu	
MANUALS	

Danelec Marine

Key Danelec Marine ECDIS Menu Functions

1.	View list of installed Charts	Main Menu>Nav Data>Chart library
2.	View the latest update number installed	Right click chart>Charts
3.	Change Chart Settings	Main Menu>Settings>Chart>Chart objects
4.	View information on charted objects and view additional text	Right click object
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Main Menu>Settings>Chart>Portrayal settings
6.	Input a Mariner Object	Main Menu>Nav Data>Mariner objects
7.	Input a Manual Update	Main Menu>Nav Data>Manual update
8.	Turn EBL/VRM on	Indicators>EBRL Tool
9.	Configure the Guard Zone (Anti-grounding)	Main Menu>Settings>Alarms>Grounding check
10.	Configure Ship's Track	Main Menu>Settings>Vessel>Display settings
11.	Configure Velocity Vectors	Main Menu>Settings>Vessel>Display settings
12.	View Logbook	Main Menu>Log
13.	Input a Visual or Radar Fix	Main Menu>Tools>Manual observation
14.	Turn on AIO	Main Menu>Layers>Chart overlays
15.	Turn on Path Predictor	Main Menu>Settings>Vessel>Display settings




```

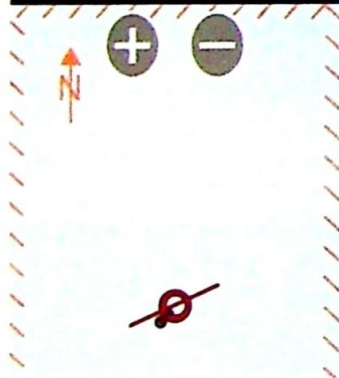
2015-08-14 13:48:48 UTC
2015-08-14 16:48:48 LOC
32°29'7713"S      POS1
060°55'5336"E
COG 227.0°      POS1
SOG 0.0 kn      POS1
HDG 277.0°      HDG1
STW 1.0 kn      STW1
ROT 0.0 STBD    HDG1
DPTH 0.0 m      DPTH1
WDr 250.5° T North WNC1
WSpd 1.8 kn     WNC1

MyRoute
WPT 4
CTS 228.4°
XTD 7.2m STBD
DWOL 0.175NM
DTA 8.060NM
TTG
TTA
ETA
    
```














← UTC, Local Time and Date

← Sensors Panel

← Route Monitoring Panel



← Look-ahead Window

-  – Man Overboard
-  – Alarms, Warnings and Cautions
-  – Grounding Check
-  – Show Vessel
-  – Display Mode
-  – Sound Mute
-  – NavBox Updates Available
-  – Targets Display On/Off
-  – Vessel Motion Mode
-  – AIS Message
-  – ERBL Tool
-  – Day/Night Mode
-  – Chart Orientation

3. FURUNO FEA-2107/2807 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Main Chart Display		
	Status Bar		Main Menu
	Information Area		
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Nav Tools		
	Parallel Index Lines		AIS Own Ship Info
	Clearing Lines		Targets Page
	Safety Message		Mariner Page
	NAVTEX Message		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart Display		
	Chart Menu		Symbol Display
	Chart Display		AIS Outlines (ON/OFF)
	Set chart viewing dates 1		Scale min Accuracy
	ENC Status Report		User Event (ON/OFF)
	ECDIS Chart 1		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Routes		
	Route		Notes
	Edit Route		Anchor Watch
	User Chart		Parameters, Prepare
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.		
	Information Area		Route Page
	Information from the positioning sensor		Monitored Route
	HDG		Center line (ON/OFF)
	SPD		Channel limit (ON/OFF)
	SB		Safety margin (ON/OFF)
	COG		WPT mark (ON/OFF)
	SOG		Leg marks (ON/OFF)
	Latitude and longitude position of own ship		Wheel over line (ON/OFF)
	Datum		
	Positioning source		
	Cursor position information		
	Latitude and longitude of position of cursor		
	Range		
	Bearing		

FURUNO FEA-2107/2807 – Familiarisation Checklist (Page 2 of 2)

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Record	Chart Catalogue
Chart Usage Log	Set Chart viewing dates
Chart Menu	Chart Permits
Go Back	ECDIS Chart 1
Activate ARCS chart	Open Chart by Cell name
Load and Update Charts	Chart Cell Status
SENC Convert	Manual Updates
Remove Charts	System
C-Map Ed 3	

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensors	
SPD/CRS Page	Other Page
POSN Page	DR (ON/OFF)
Manual speed (ON/OFF)	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Chart Alert Parameters	
Check Area	Alarms Page
Ahead	Navigational Hazard

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Main Menu	System
Set STD Display	Initial Settings
MOB	Optimization Parameters
Event	Print Optimization Parameters
Record	Self Test
	Standby
	Presentation Library
	Access Server and Diagnostic

11. ECDIS Operator's Manual

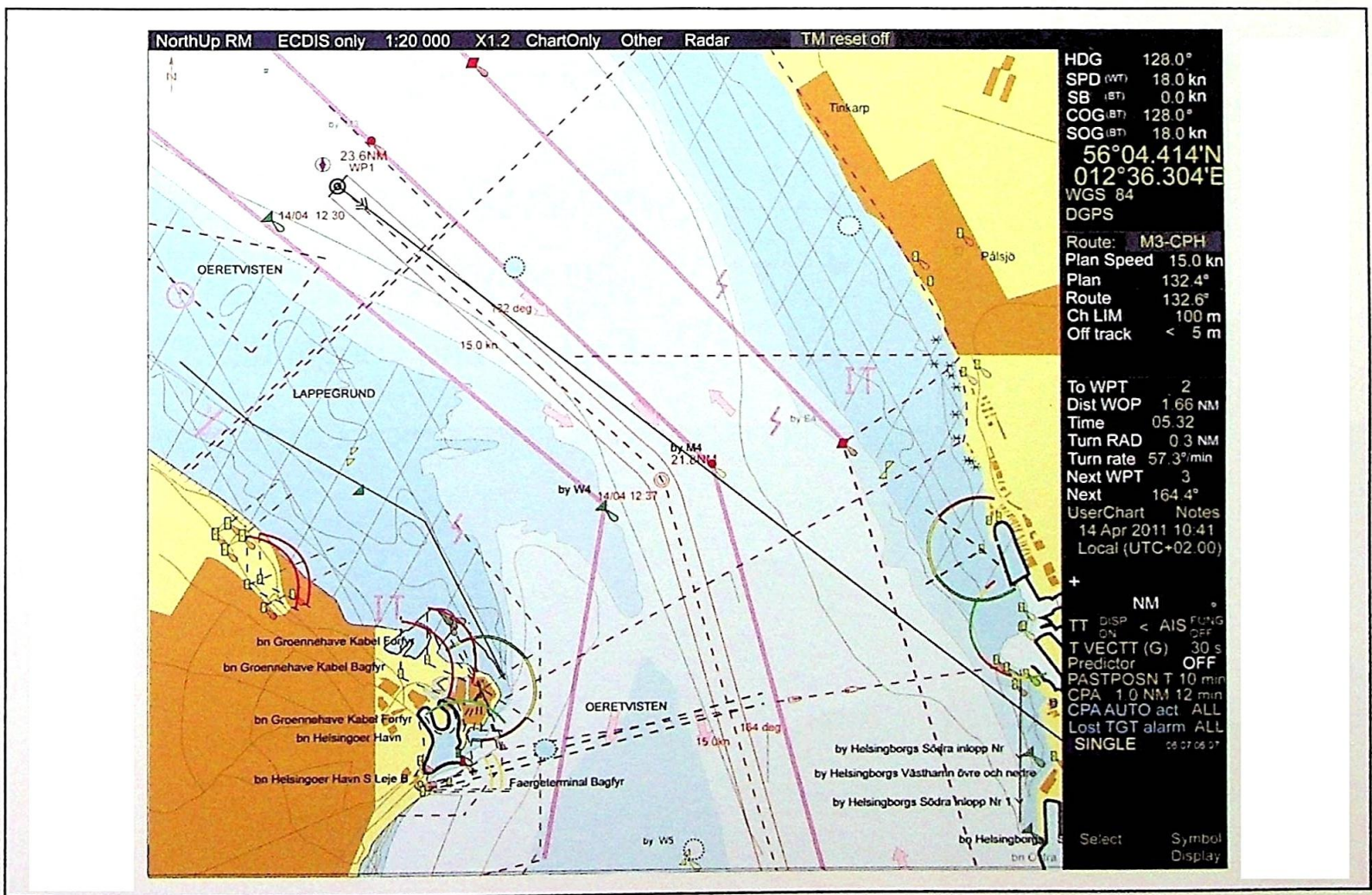
Locate the system's operator's user guide for referencing and help.

Main Menu	
Help	

FURUNO FEA-2107/2807

Key FURUNO FEA-2107/2807 ECDIS Menu Functions

1.	Selection of additional side panels (Conning, Docking, Chart Legend)	Move the cursor over route display panel and right click
2.	Configuration of Ship's Maximum Speed, Draught and ROT	Menu>Initial Settings>Navigation Parameters>Ship and Route Param
3.	View Chart Catalogue (ARCSs or ENCs depends upon format selected)	Menu>Chart Menu>Chart Catalogue
4.	View the latest update number installed	Menu>Chart Menu>Chart Cell Status
5.	Change and Save Chart Settings	Menu>Chart Display>Save As
6.	View information on charted objects and view additional text	Mouse Functions>Info
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Menu>Chart Display>Chart
8.	Input a User Chart Object	Menu>User Chart>Plan>Create
9.	Input a Manual Update	Menu>Chart Menu>Manual Updates>Planning>New
10.	Turn the ship outline on	Menu>Symbol Display>General
11.	Configure the Check Area (Anti-grounding Cone)	Menu>Initial Settings>Chart Area Alert Parameters>Check Area
12.	Configure Velocity Vectors and Ship's Track	Menu>Symbol Display>General/Tracking
13.	Manually change WPT information of an Active Route	In the Monitor Route dialogue box in the Monitor page
14.	View past Alarms and Warnings	Menu>Record>Alert Log
15.	Input a Visual or Radar Fix	Menu>Sensors>LOP

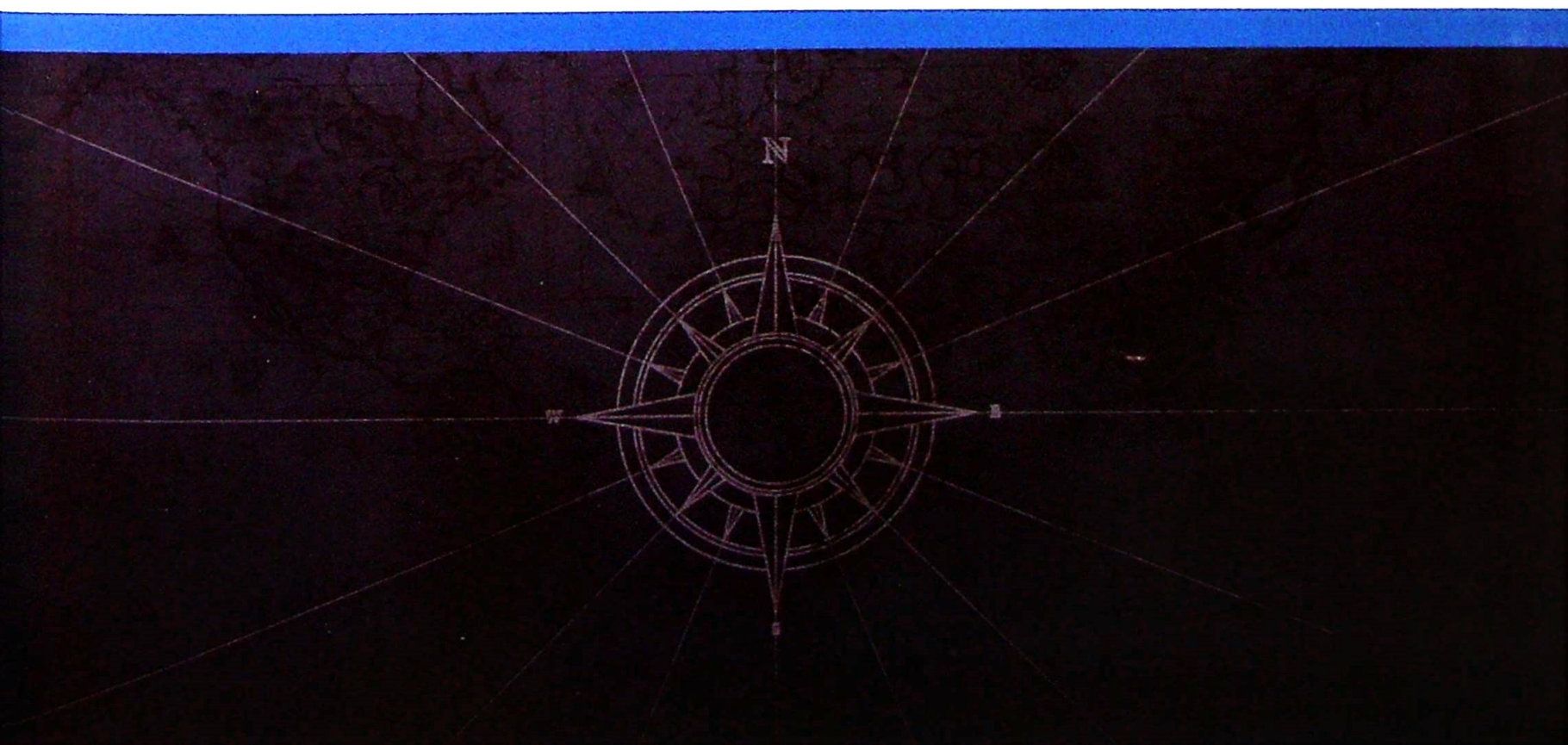


HDG 128.0° SPD (WT) 18.0 kn SB (BT) 0.0 kn COG (BT) 128.0° SOG (BT) 18.0 kn 56°04.414'N 012°36.304'E WGS 84 DGPS	←	System Status
Route: not Selected Plan Speed kn Plan ° Route ° Ch LIM m Off Track m	←	Ship's Position, Course and Speed
To WPT Dist WOP NM Time Turn RAD NM Turn rate °/min Next WPT Next ° UserChart Notes 14 Apr 2011 14:31 Local (UTC +02:00)	←	Route Information
+ NM ° TT DISP < AIS FUNC ON OFF T VECT (G) 30 s Predictor OFF PASTPOSN T 10 min CPA 1.0 NM 12 min CPAUTO act. ALL Lost TGT alarm ALL SINGLE 06.07 06.07	←	Route Monitoring Information
Select Sel ect	←	Select User Chart and Notes
	←	Time and Date
	←	Latitude and Longitude of Cursor
	←	Target Information
	←	Alarms and Warnings
	←	Mouse Function Area

FURUNO

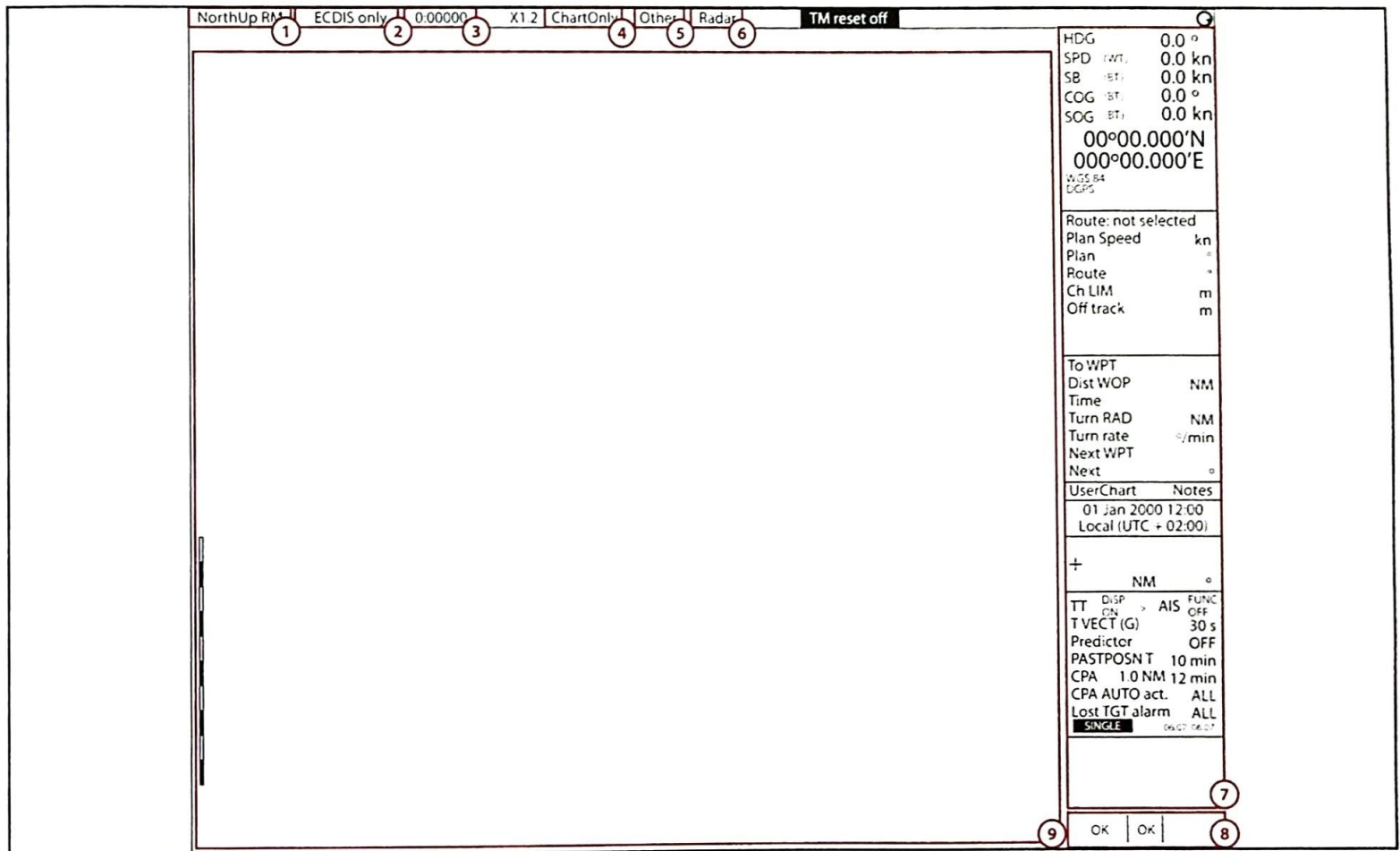
FEA-2107/FEA-2807

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Section 1: Main Display

1.1 Screen Layout



1 Presentation mode

2 ECDIS mode

3 Chart scale

4 Chart only switch

5 Name of display settings

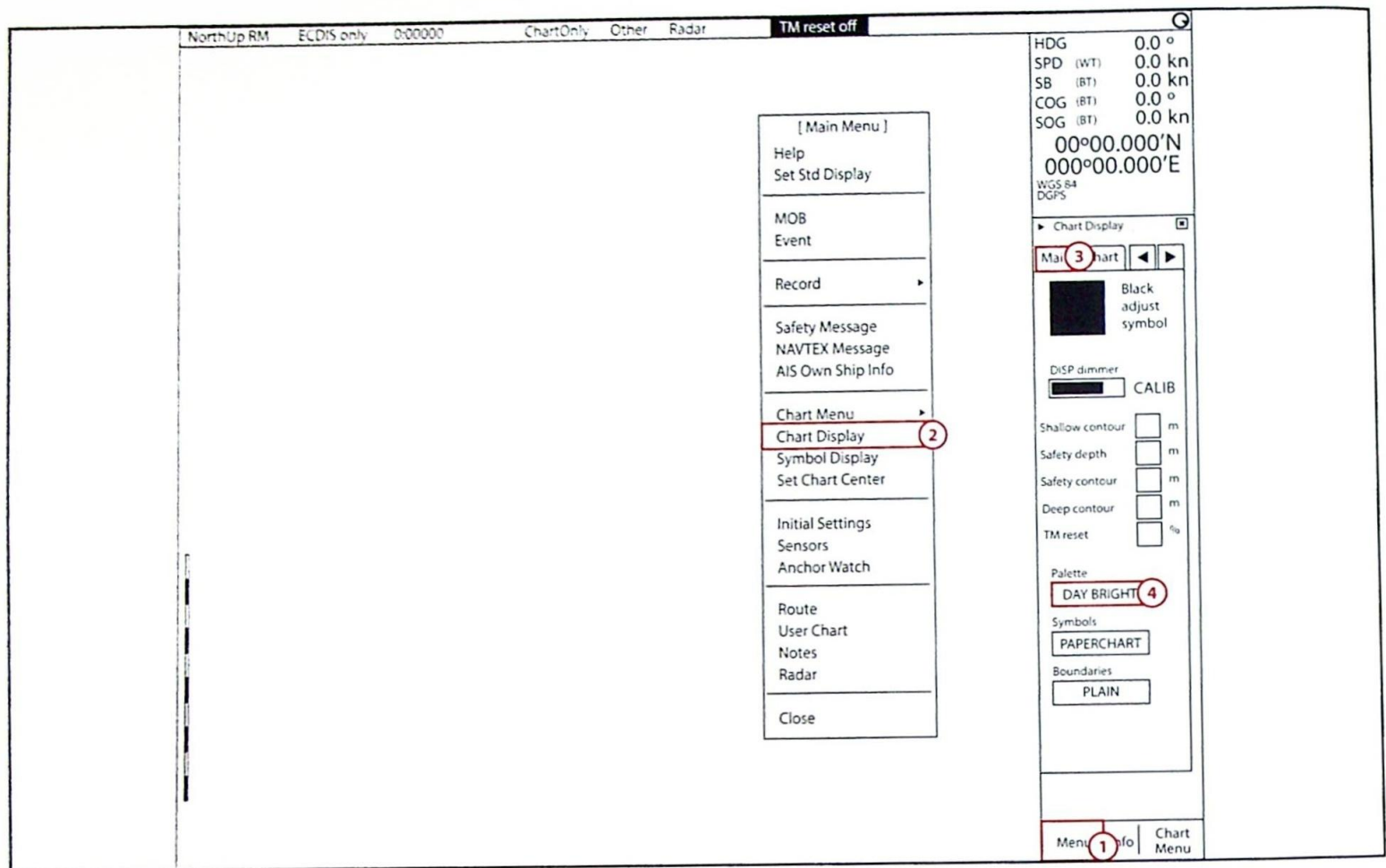
6 Radar selection

7 Information area

8 Mouse functions area

9 Electronic chart area

1.2 Colour Palette/Profiles



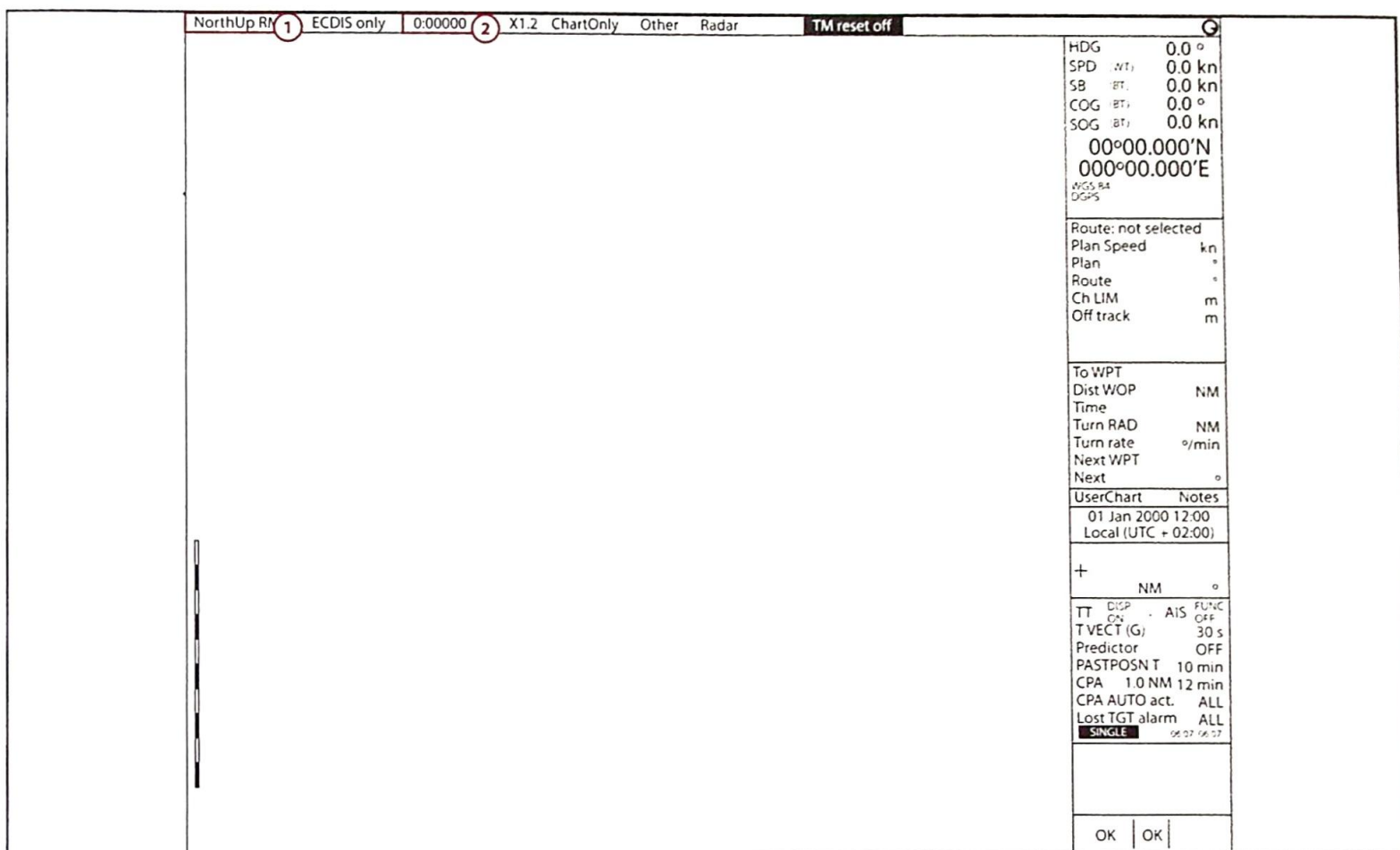
1 Open the main menu.

3 Ensure 'Main' is selected.

2 Click 'Chart Display'.

4 Configure the 'Palette'.

1.3 Range/Scale/Motion



1 Move the cursor over this tab.

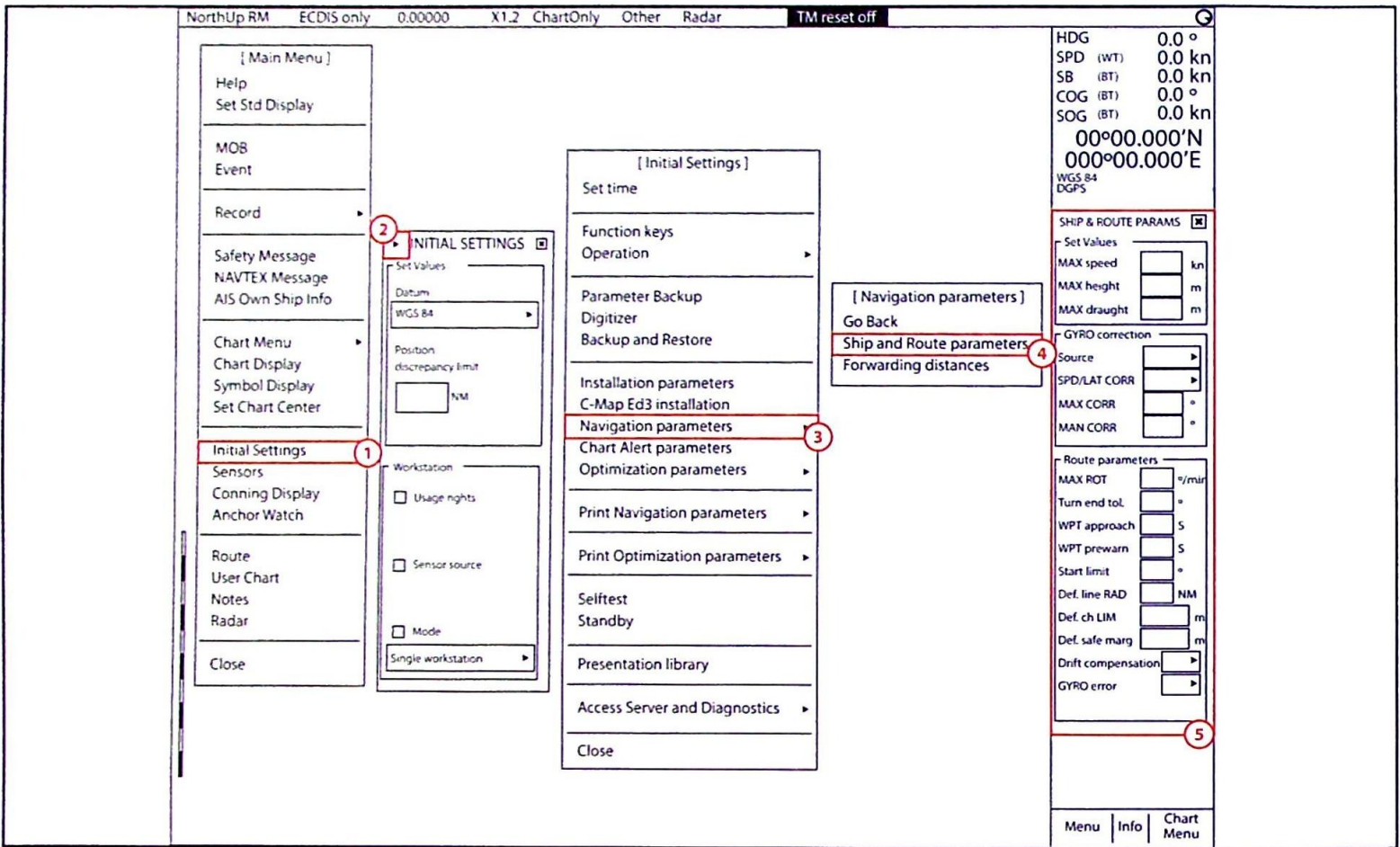
a Use scroll wheel to select options 'NorthUp TM'/'CourseUp TM'/'NorthUp RM'/'CourseUp RM'/'RouteUp RM'.

b Push scroll wheel to confirm your selection.

2 Move the cursor over this tab.

a Use scroll wheel to move up and down the scale.

1.4 Setting CCRP



1 Select 'Initial Settings' in the main menu.

2 Move cursor to the triangle to access 'Initial Settings'.

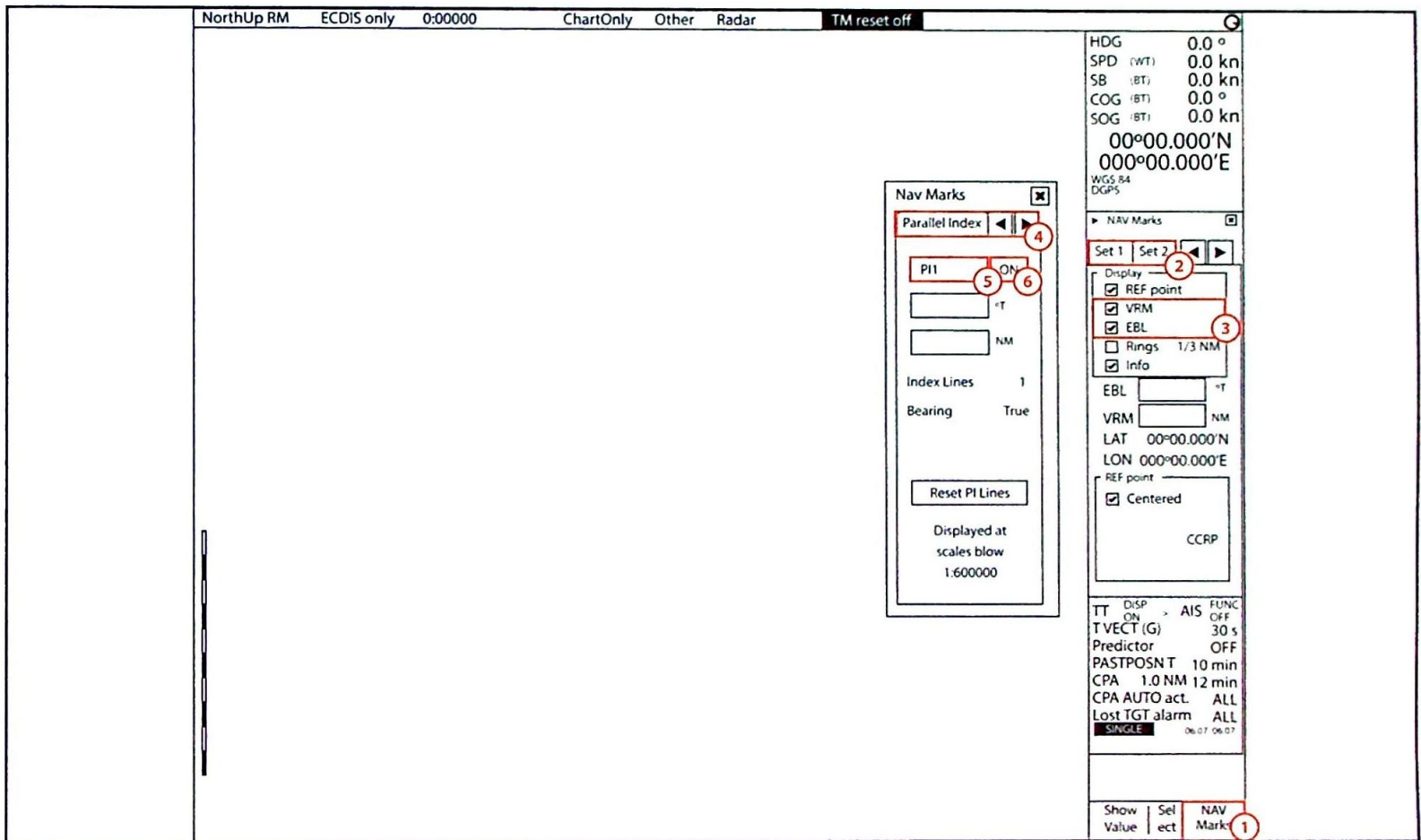
3 Select 'Navigation parameters'.

4 Select 'Ship and Route parameters'.

5 Set ship parameters/GYRO correction/route parameters.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



1 Click 'NAV Marks' to open the NAV Marks menu.

2 Click 'Set 1' or 'Set 2'.

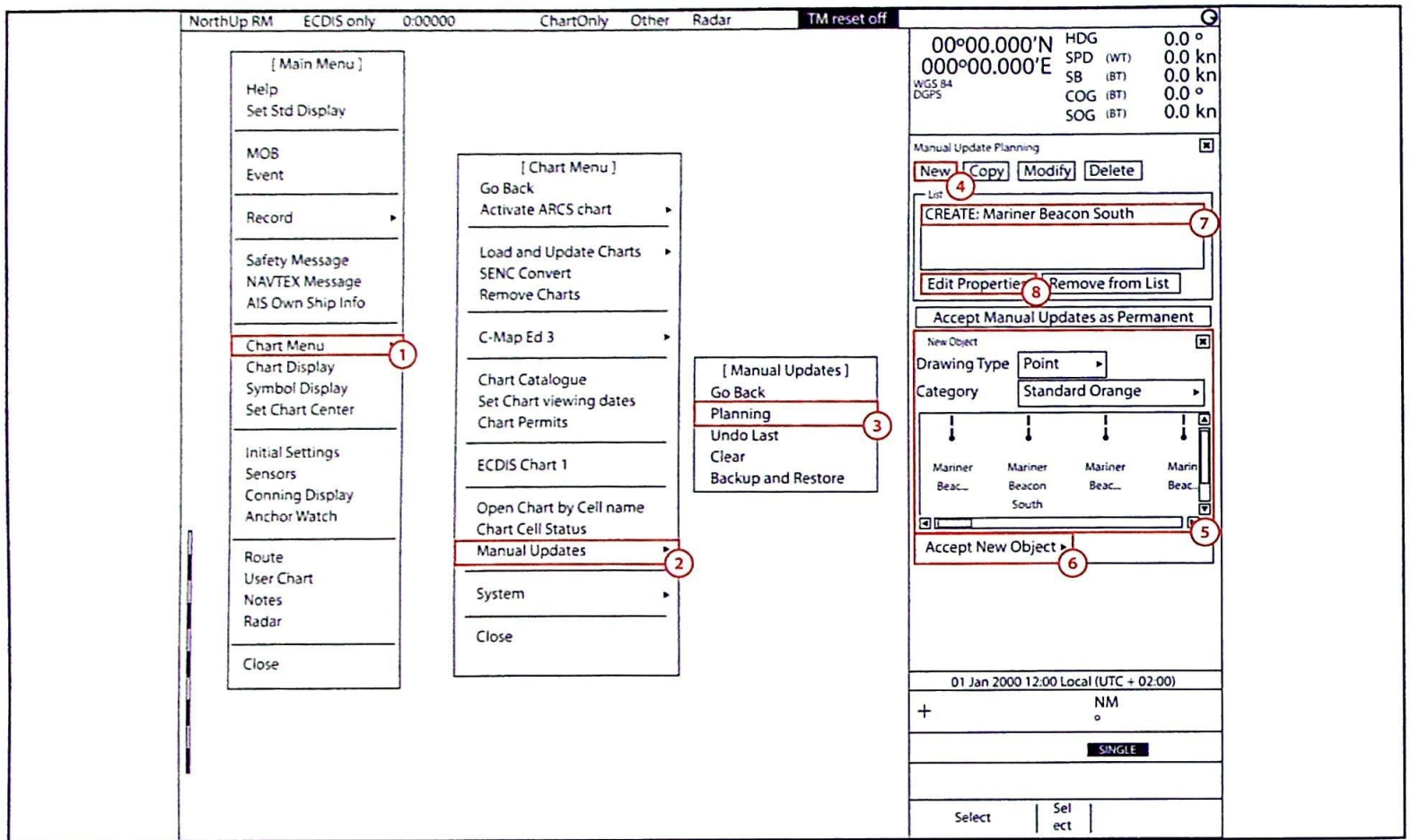
3 Enable 'VRM/EBL' by ticking the boxes.

4 Use the arrows to select 'Parallel Index'.

5 Select a PI line.

6 Enable your PI line.

2.2 Manual Corrections Part 1



1 Select 'Chart Menu' from the main menu.

2 Select 'Manual Updates'.

3 From the Manual Updates, select 'Planning'.

4 Click 'New'.

5 Select 'Drawing Type' and 'Category' and select an object to add.

6 Click 'Accept New Object'.

7 Select the object you would like to edit.

8 Click 'Edit Properties'.

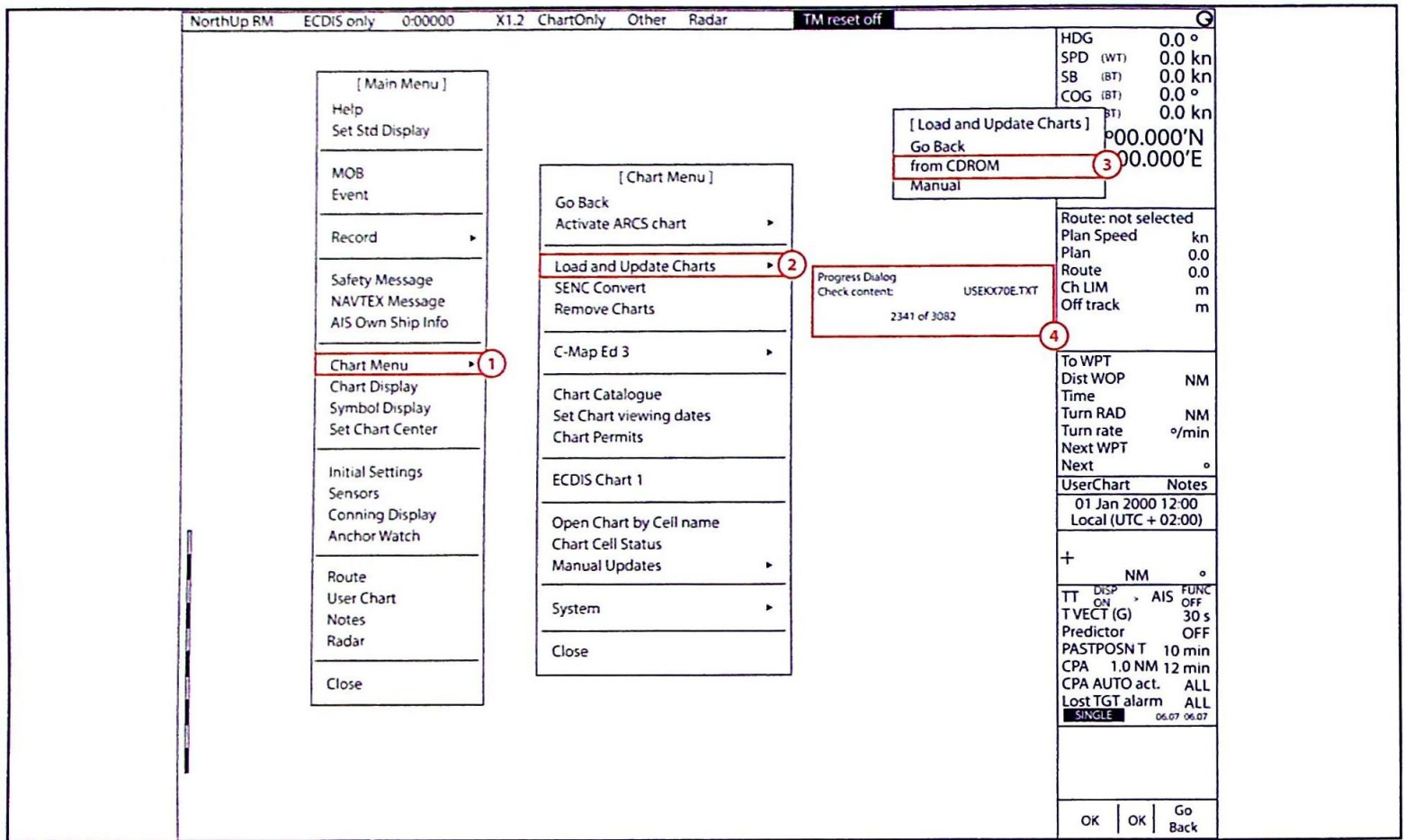
2.2 Manual Corrections Part 2

The screenshot displays the ECDIS software interface with a 'Manual Update Planning' dialog box and a 'Position Edit' panel. The dialog box contains a list with 'CREATE: Mariner Beacon South' and buttons for 'New', 'Copy', 'Modify', 'Delete', 'Edit Properties', 'Remove from List', and 'Accept Manual Updates as Permanent'. The 'Position Edit' panel shows coordinates (LAT 00°00.000'N, LON 000°00.000'E) and buttons for 'Edit Position', 'Accept', and 'Accept'.

- 1 Click 'Edit Position'.
- a Move the cursor to the required position and left click.
- 2 Click 'Accept'.

- 3 Click 'Accept' again.
- 4 Click 'Accept Manual Updates as Permanent'.

2.3 Chart Updates Part 1



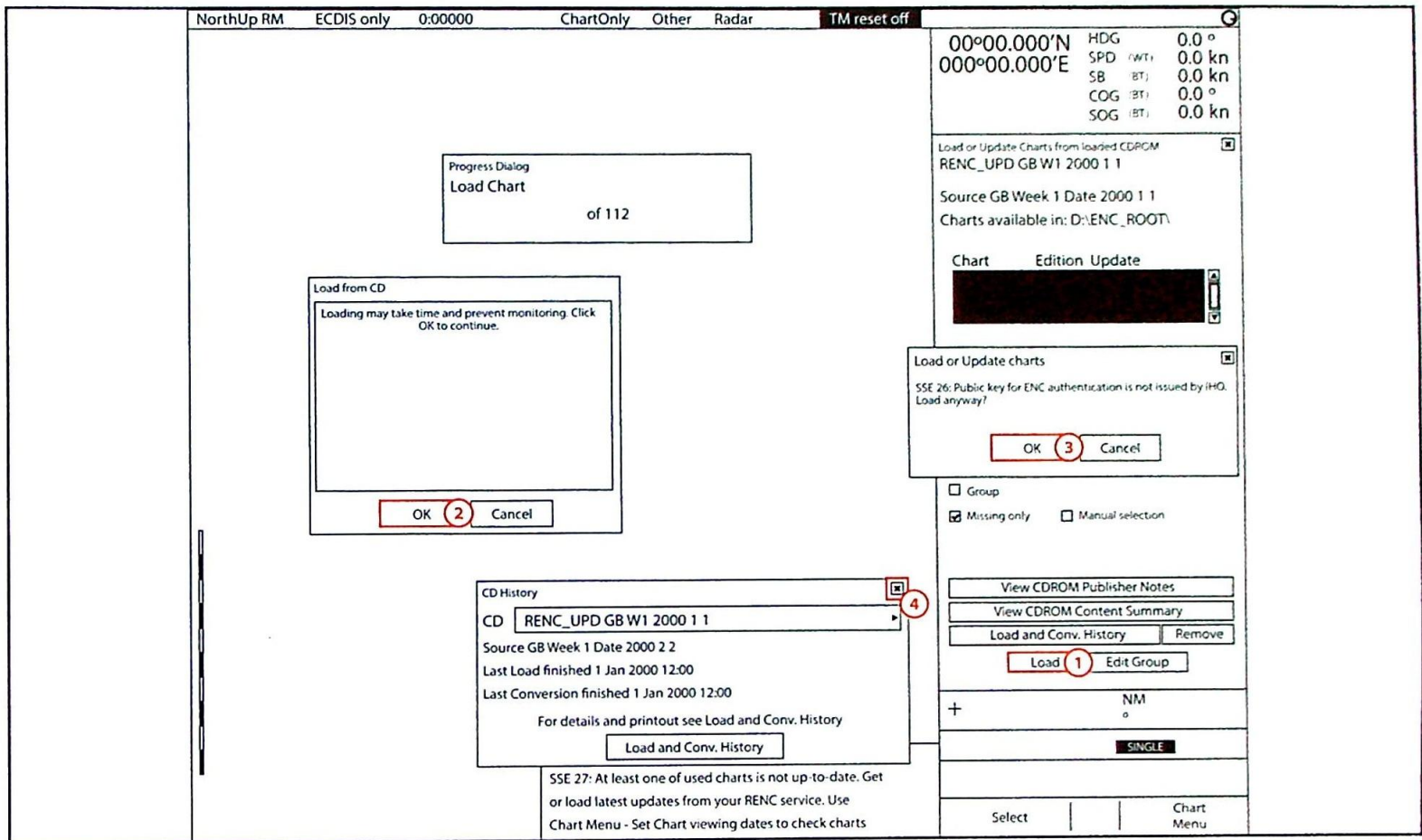
1 Select 'Chart Menu' from the main menu.

2 Select 'Load and Update Charts'.

3 Select 'from CDROM'.

4 Show charts being checked.

2.3 Chart Updates Part 2

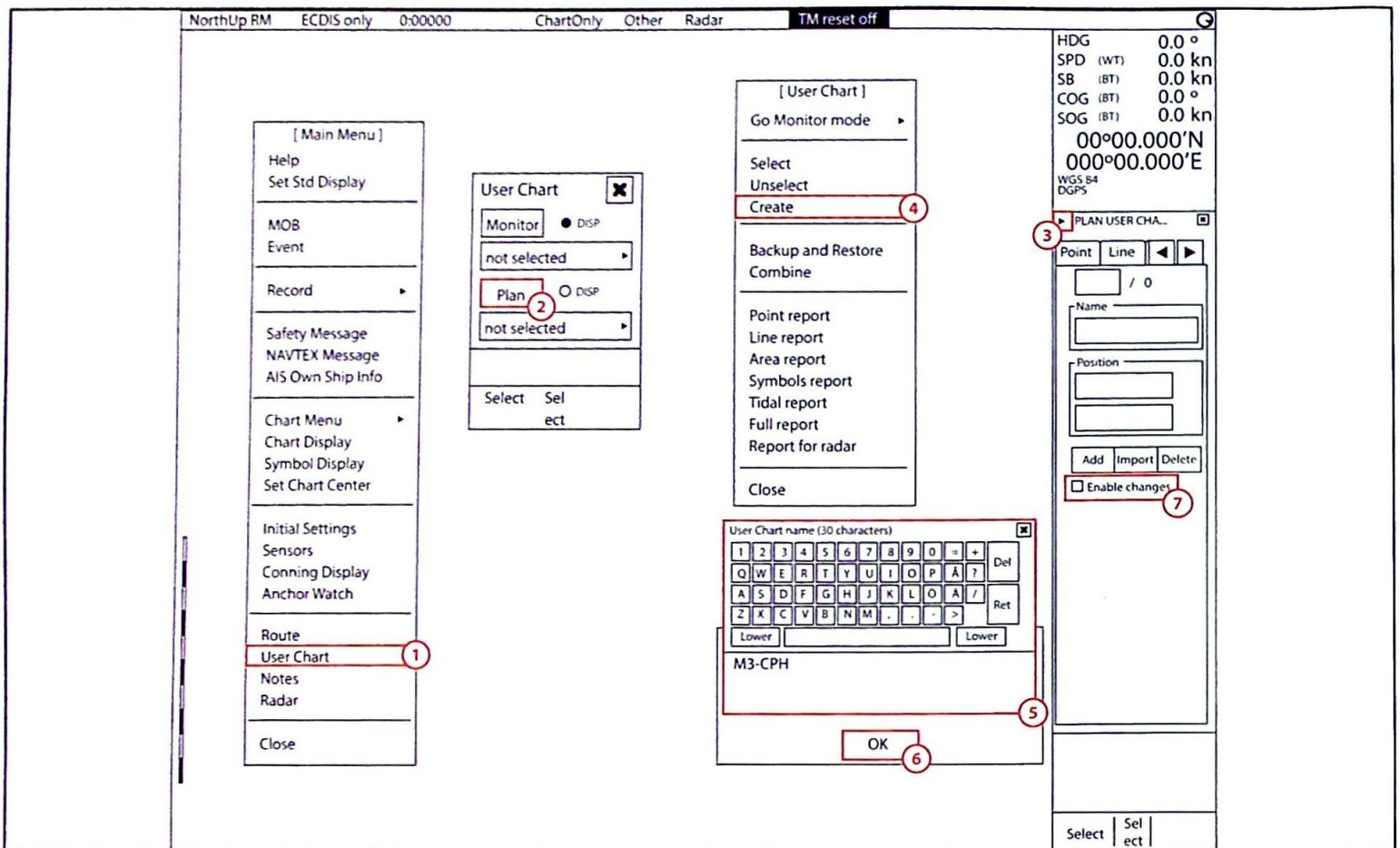


- 1 Click 'Load'.
- 2 In the 'Load from CD' window, click 'OK'.

- 3 Click 'OK' in the 'Load or Update charts' window.

- 4 Click the cross to close the windows.

2.4 No Go Areas/User Charts Part 1



1 From the main menu, select 'User Chart'.

2 Click 'Plan' to show the 'Plan User Chart' dialog box.

3 Move the cursor onto the triangle to view the User Chart menu.

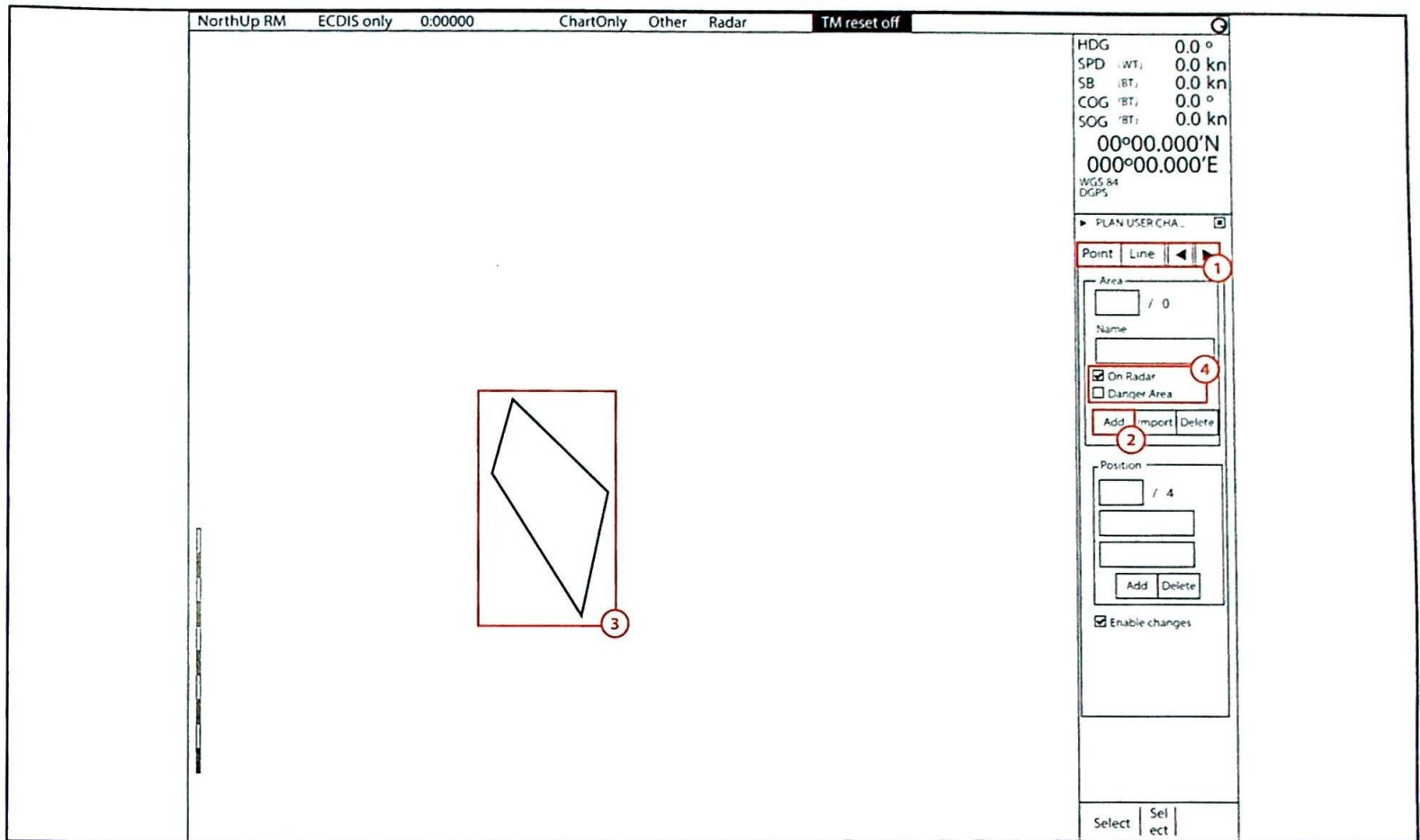
4 Select 'Create'.

5 Enter a name for the User Chart.

6 Click 'OK' to finish.

7 Check 'Enable changes' to be able to add to the User Chart.

2.4 No Go Areas/User Charts Part 2



1 Use the arrows to show the tab you require:

- a Line tab
- b Symbol tab
- c Area tab
- d Area tab

e Tidal tab

f Point tab

2 Click 'Add'.

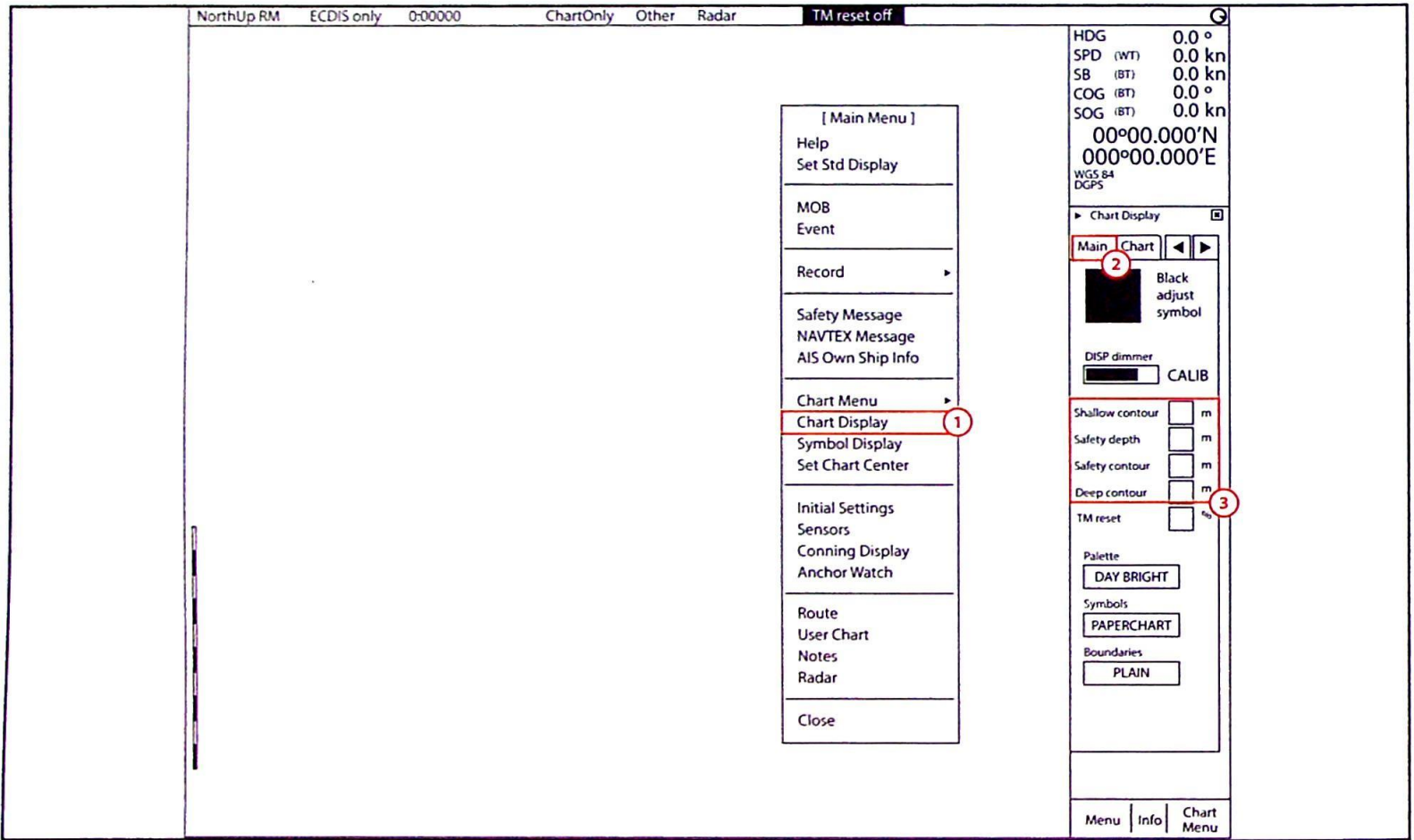
3 Move the cursor to the desired location and left click to start adding.

4 Check 'On Radar' to also display on the radar display.

5 Check 'Danger Area' to include in the chart area calculation.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour

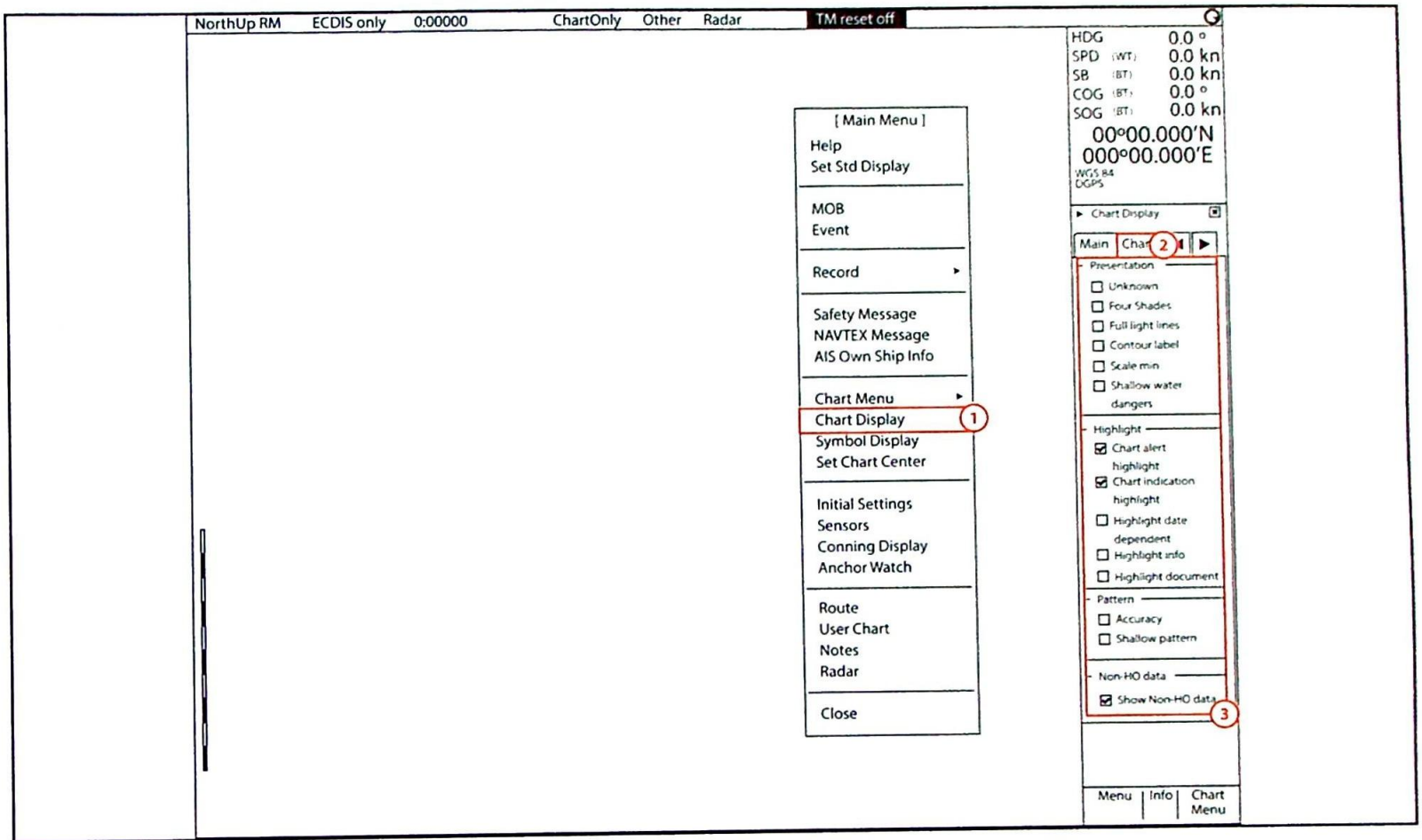


1 From the main menu, select 'Chart Display'.

3 Adjust contours and safety depth, as required.

2 Select the 'Main' tab.

3.2 Display Preference Options

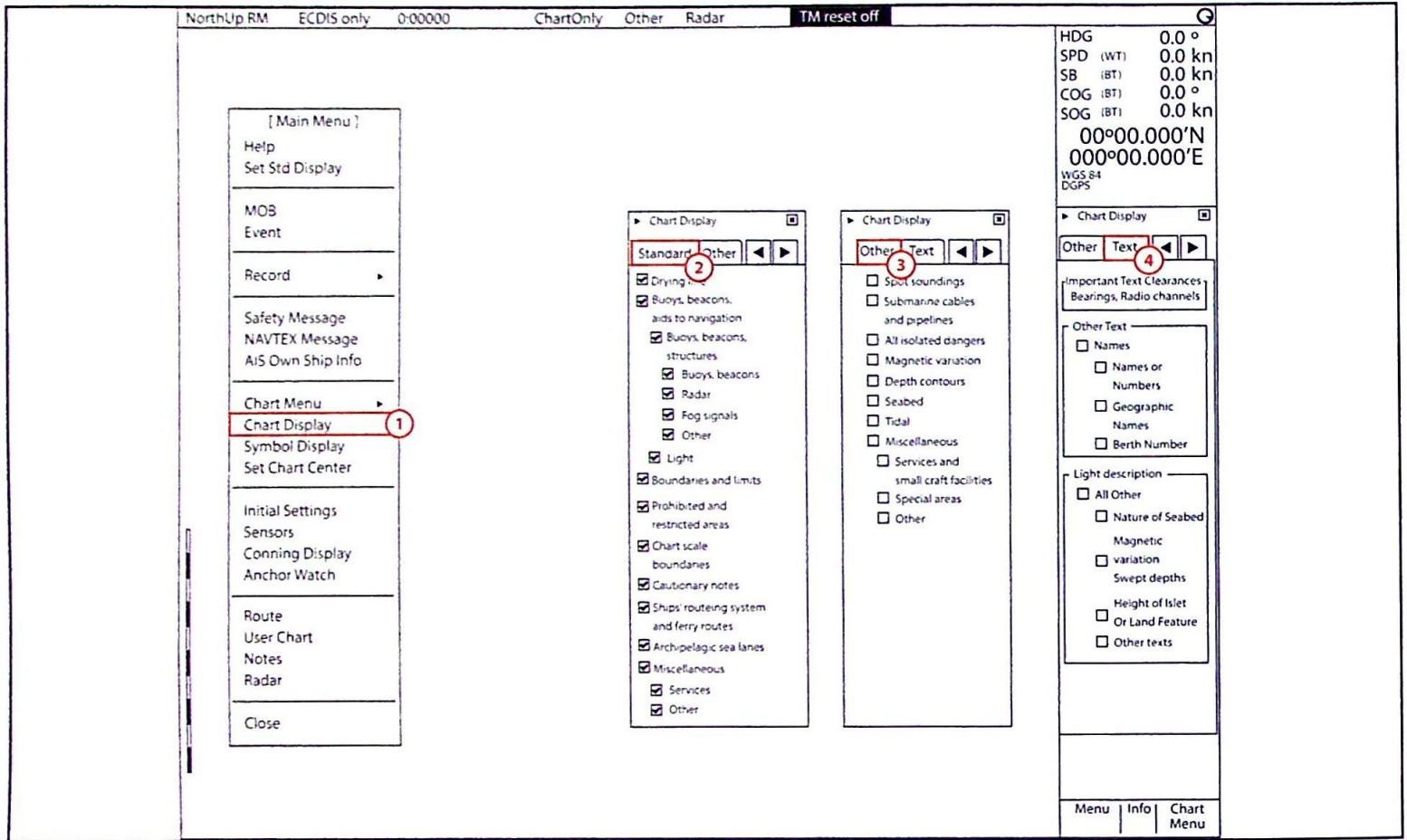


1 From the main menu, select 'Chart Display'.

3 Turn ON/OFF SENC options, as required.

2 Select the 'Chart' tab.

3.3 Display Configuration



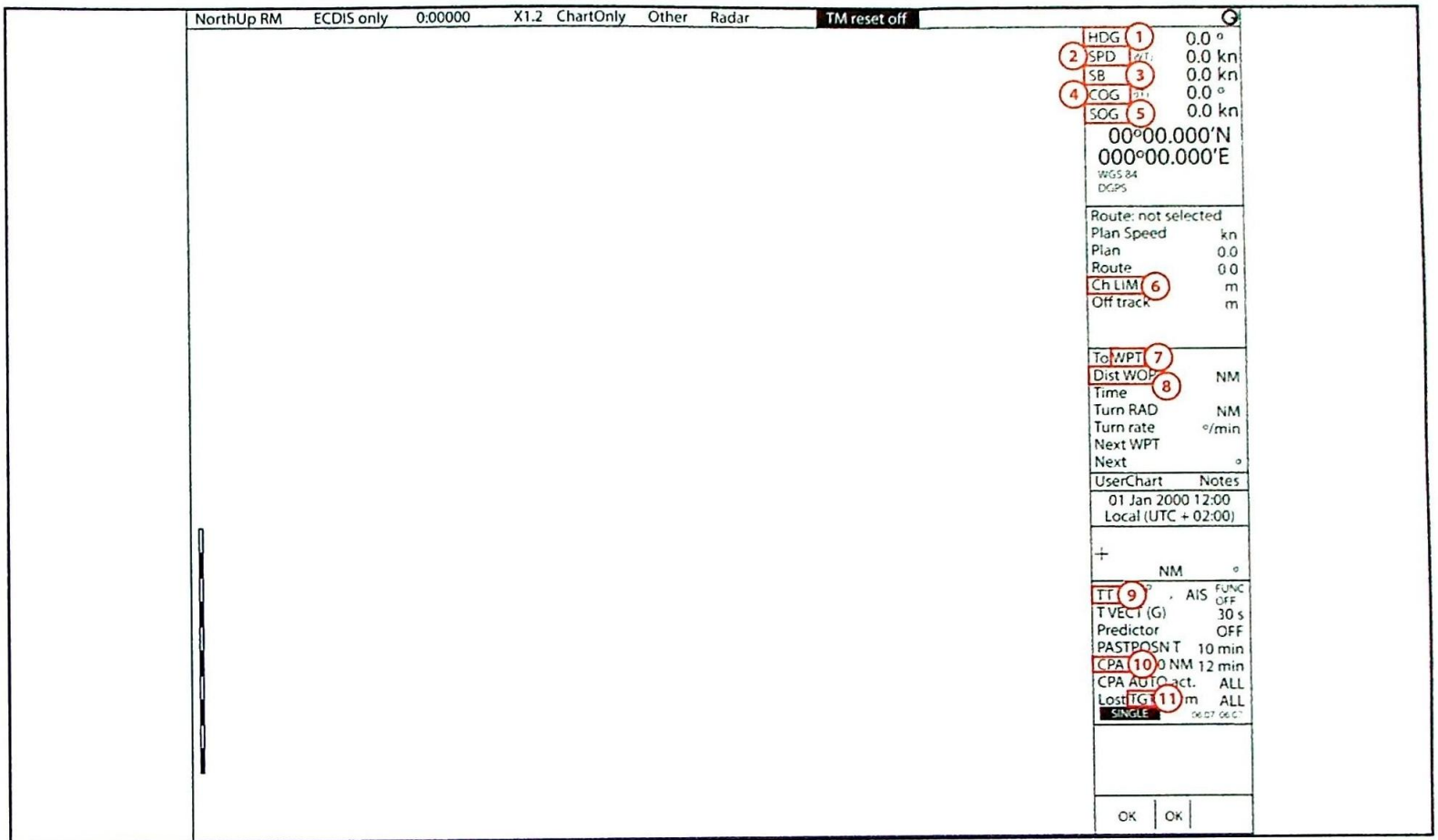
1 From the main menu, select 'Chart Display'.

2 Choose layers in the 'Standard' tab.

3 Choose layers in the 'Other' tab.

4 Choose layers in the 'Text' tab.

3.4 Abbreviations



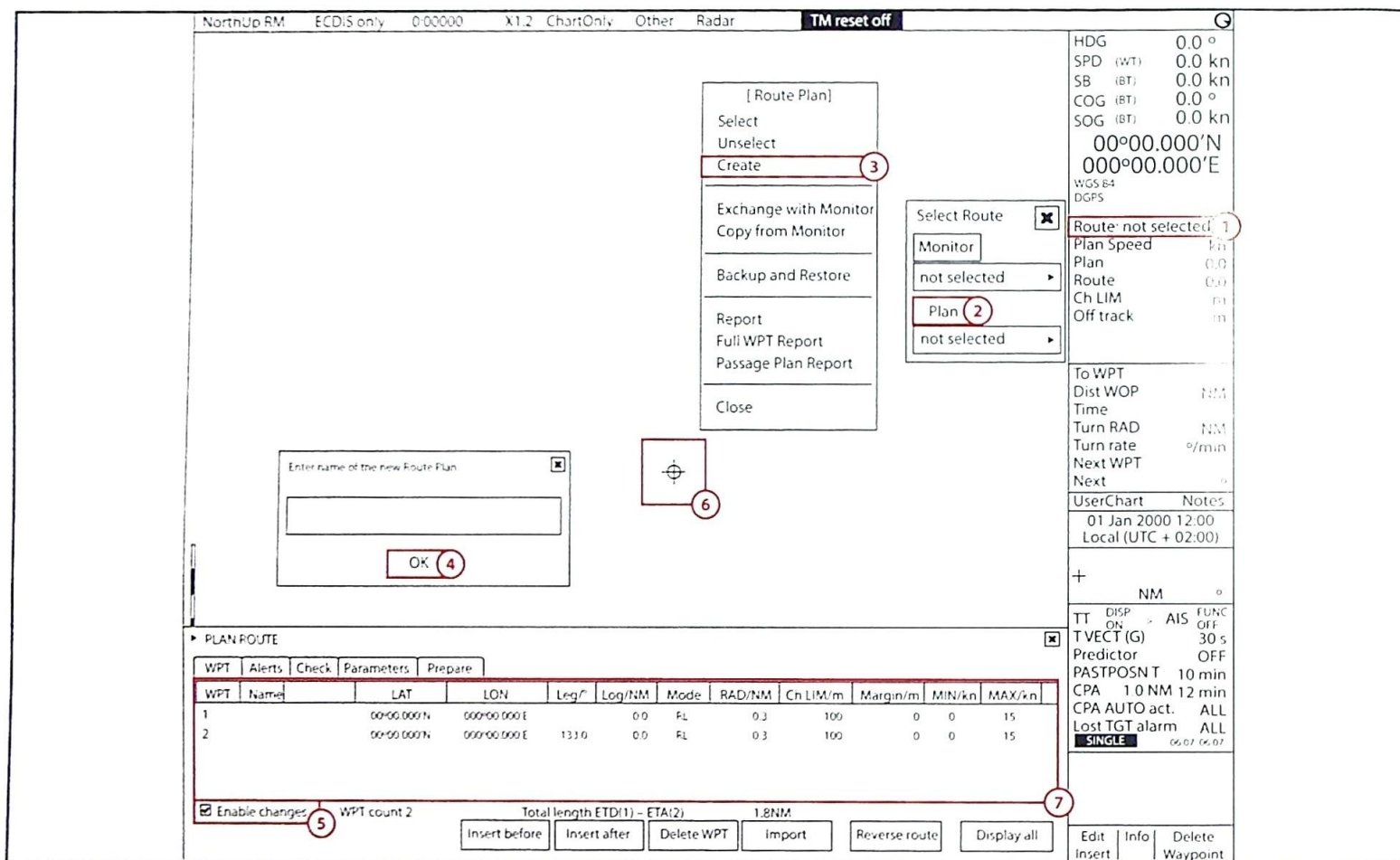
- ① Heading
- ② Speed
- ③ Transversal Speed
- ④ Course Over Ground
- ⑤ Speed Over Ground
- ⑥ Channel Limit

- ⑦ Waypoint
- ⑧ Distance Wheel Over Point
- ⑨ Target Tracking/Tracked Target
- ⑩ Closest Point of Approach
- ⑪ Target

- ① Continuous Common Reference Point
- ② System Electronic Navigational Chart
- ③ Raster Navigational Chart
- ④ Dead Reckoning

Section 4: Route Planning

4.1 Creation



1 Click 'Route' in the information area.

2 Click 'Plan'.

3 Click 'Create'.

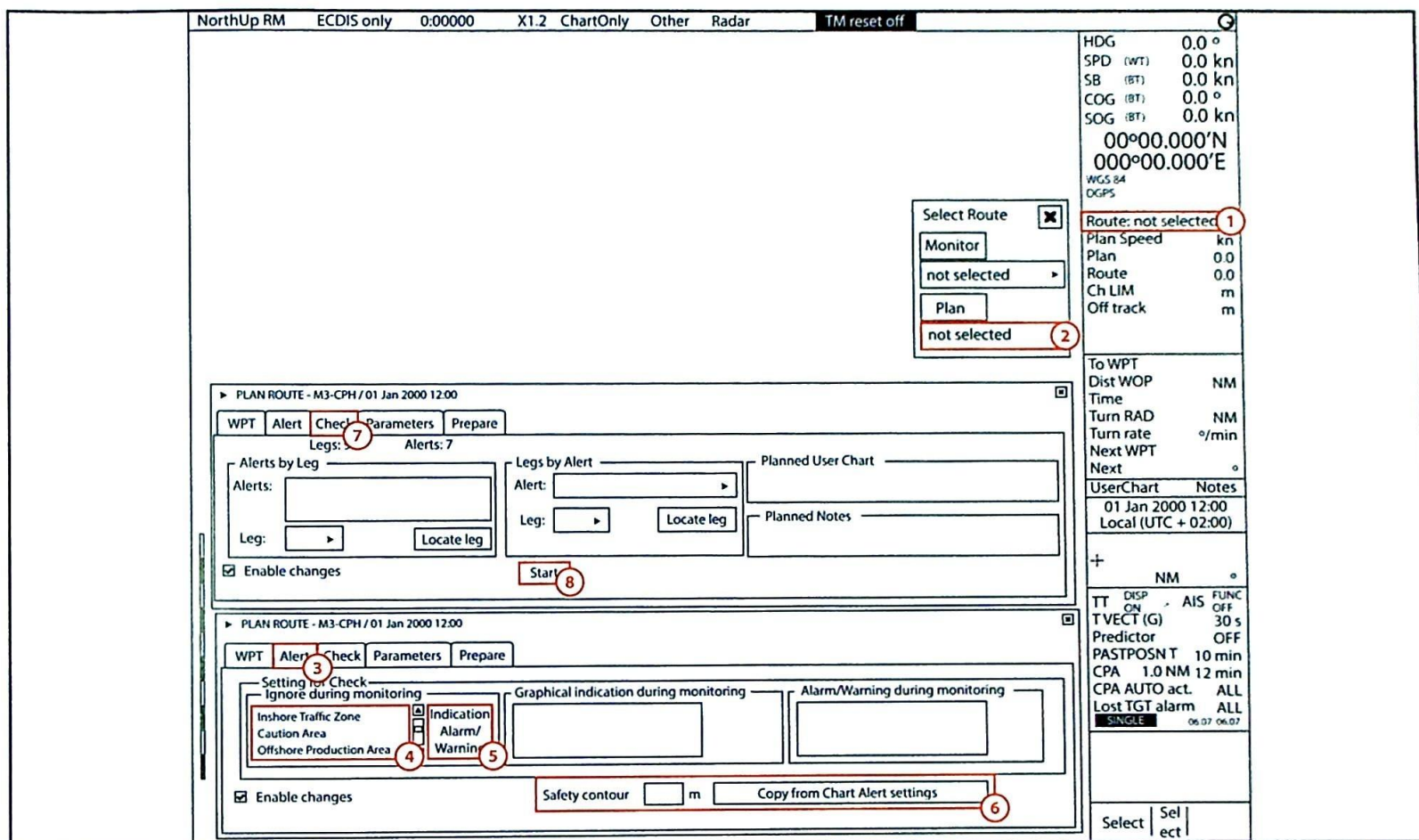
4 Enter a name for the route and click 'OK'.

5 Check 'Enable changes'.

6 Move cursor to the desired location and left click to add waypoint.

7 Edit waypoint details by moving cursor into the required field and spin the scroll wheel to change value.

4.2 Schedule/Route Checking



1 Click 'Route' in the information area.

2 Select the route you want to check.

3 Select 'Alerts' from the tabs.

4 Select the object you would like to check.

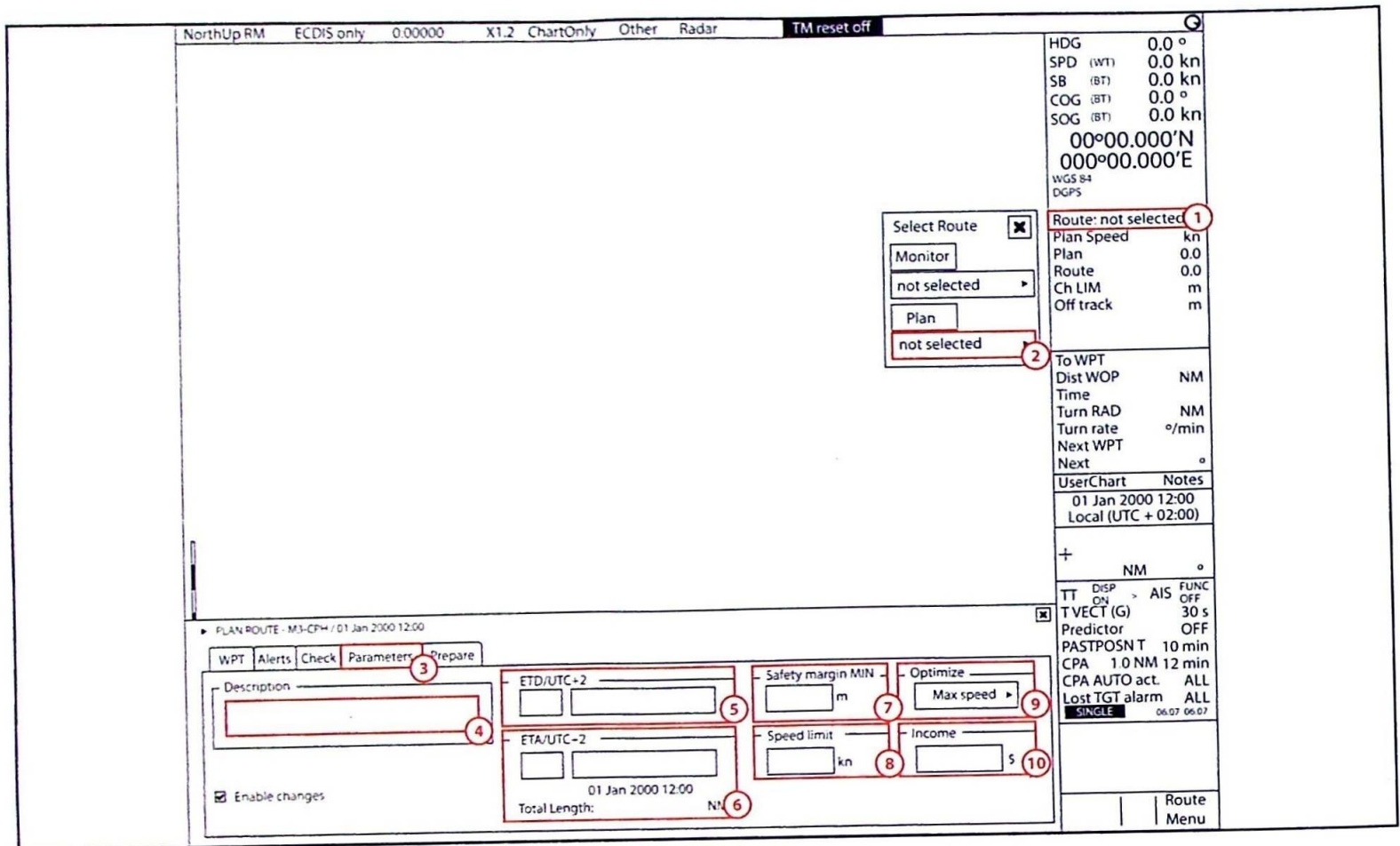
5 Select whether you want the object to be an 'Indication' or an 'Alarm/Warning'.

6 Set 'Safety contour'.

7 Select 'Check' from the tabs.

8 Click 'Start' to run route check.

4.3 Optimisation



- 1 Click 'Route' in the information area.
- 2 Select the route you would like to optimise.
- 3 Select the 'Parameters' tab.
- 4 Enter a note concerning the route.

- 5 Planned estimated time of departure from a specified waypoint.
- 6 Planned estimated time of arrival to last waypoint.
- 7 Set 'Safety margin'.
- 8 Set 'Speed limit' for route.

- 9 Select 'Optimise' type - 'Max speed'/'Timetable'/'Max profit'/'Min. Cost'.
- 10 Select budget for voyage.

4.4 Selecting Active Route

The screenshot displays the ECDIS interface with the 'MONITOR ROUT...' dialog box open. The dialog box contains the following fields and controls:

- To WPT:** A text input field.
- MAX speed:** A text input field.
- ETA WPT:** A text input field with a dropdown set to 'UTC+ 2' and a date/time field showing '1 Jan 00 12:00'.
- Distance:** A text input field with 'NM' as a unit.
- Final WPT:** A text input field.
- Distance:** A text input field with 'NM' as a unit.
- Average SPD:** A text input field with 'kn' as a unit.
- SPD profile:** A text input field with a 'Plan' button.
- This route is unchecked:** A status bar at the bottom of the dialog.

The 'Select Route' dropdown menu is open, showing the following options:

- Monitc (3)
- M3-CPH (2)
- Plan
- not selected

The right panel of the interface displays the following information:

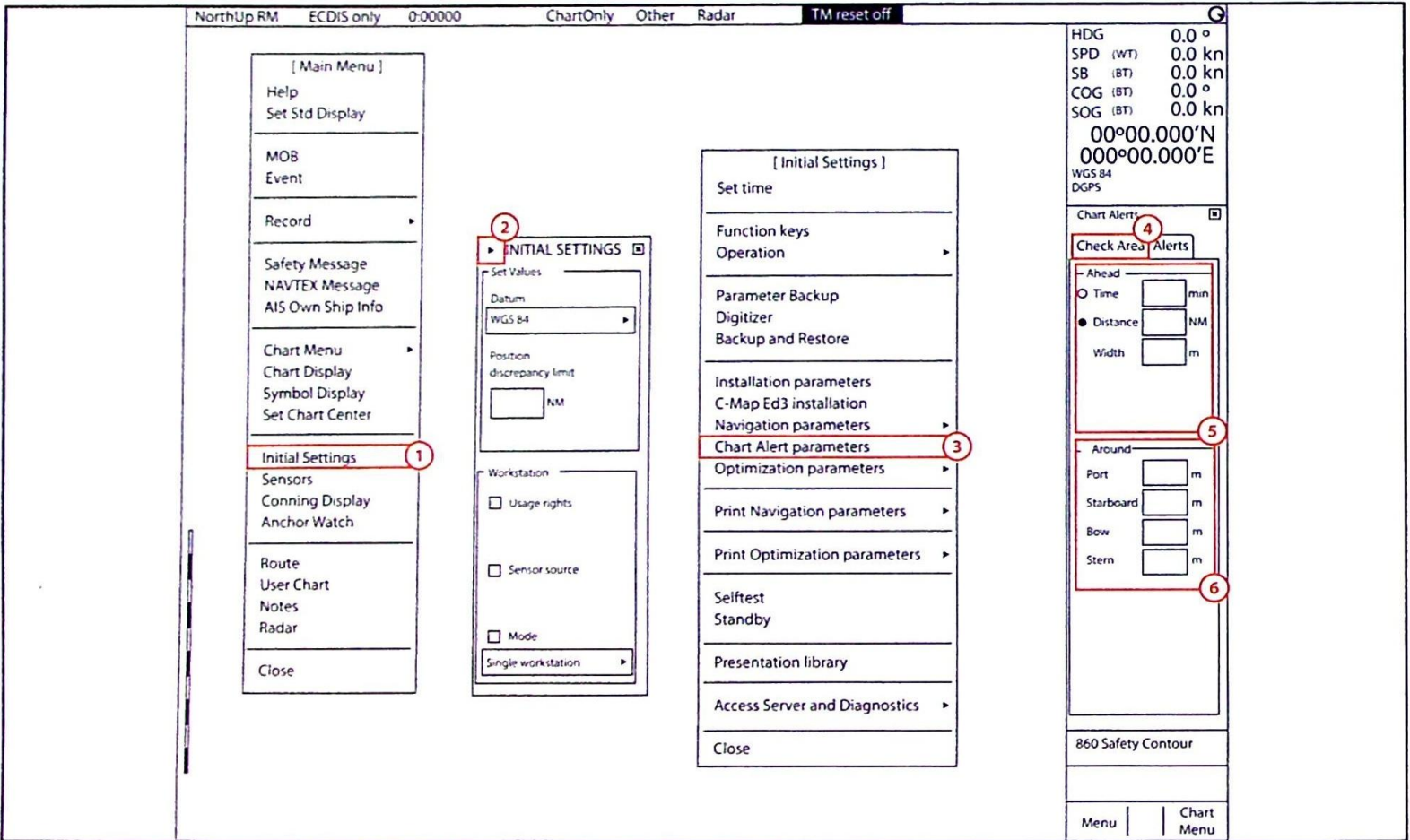
- Route: 1**
- Plan Speed: kn
- Plan: 0.0
- Route: 0.0
- Ch LIM: m
- Off track: m
- To WPT: NM
- Dist WOP: NM
- Time: NM
- Turn RAD: NM
- Turn rate: %/min
- Next WPT: a
- Next: a
- UserChart: Notes
- Notes: 01 Jan 2000 12:00 Local (UTC + 02:00)
- TT DISP: ON
- T VECT (G): 30 s
- Predictor: OFF
- PASTPOSNT: 10 min
- CPA: 1.0 NM 12 min
- CPA AUTO act.: ALL
- Lost TGT alarm: ALL
- SINGLE: 06:07 06:07

- 1 Click 'Route' in the information area.
- 2 Select the route you want to load.

- 3 Select 'Monitor'.
- 4 'Monitor route dialog' box.

Section 5: Route Monitoring

5.1 Look-Ahead

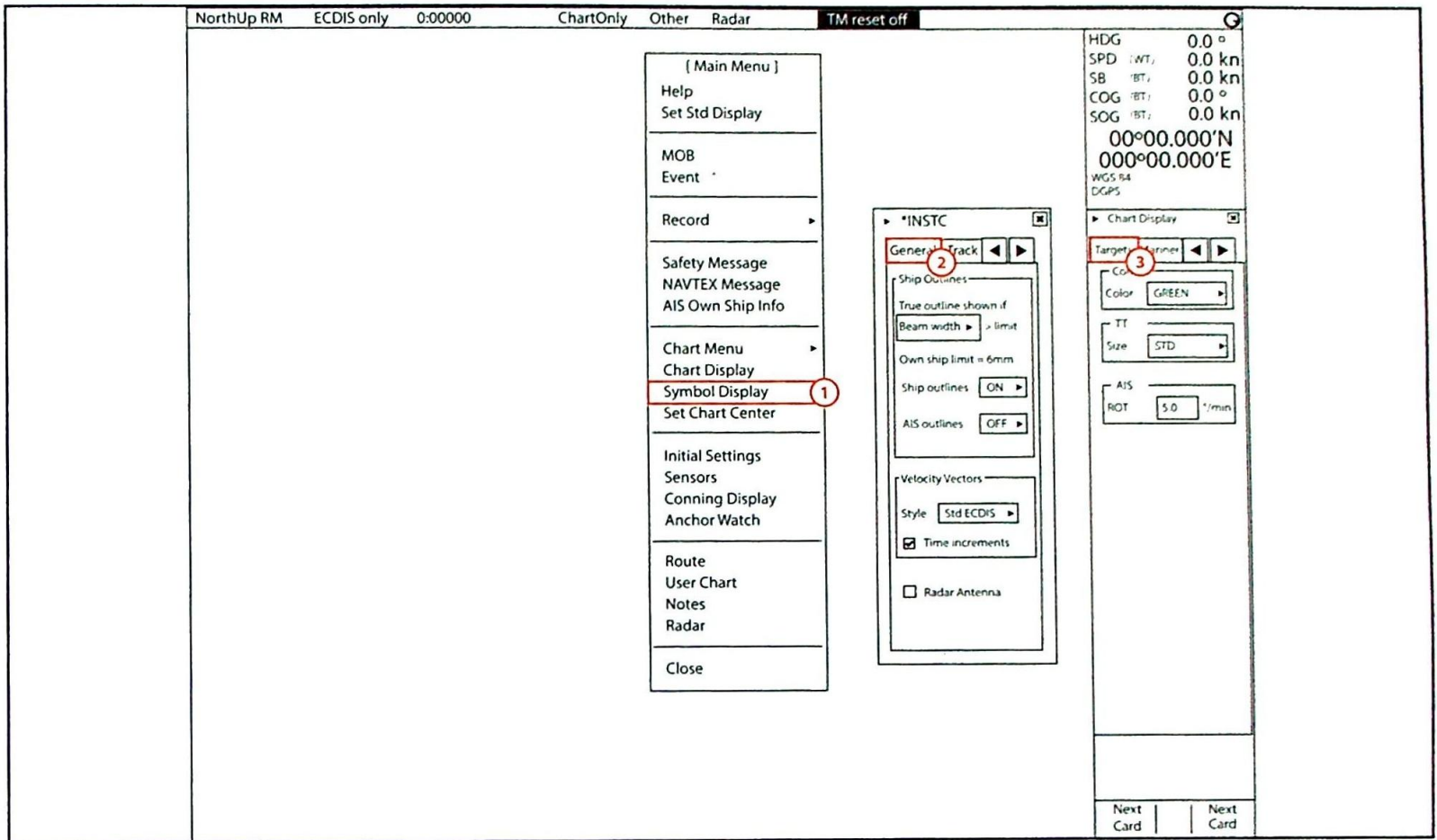


- 1 Select 'Initial Settings' from the main menu.
- 2 Move the cursor onto the triangle inside 'Initial Settings'.
- 3 Select 'Chart Alert parameters'.
- 4 Select 'Check Area'.

- 5 Choose check area ahead:
 - a Time will increase/decrease based on vessel speed.
 - b Distance will be a fixed distance ahead.
 - c Insert width for time/distance.

- 6 Insert port/starboard/bow/stern values in the 'Around' box.

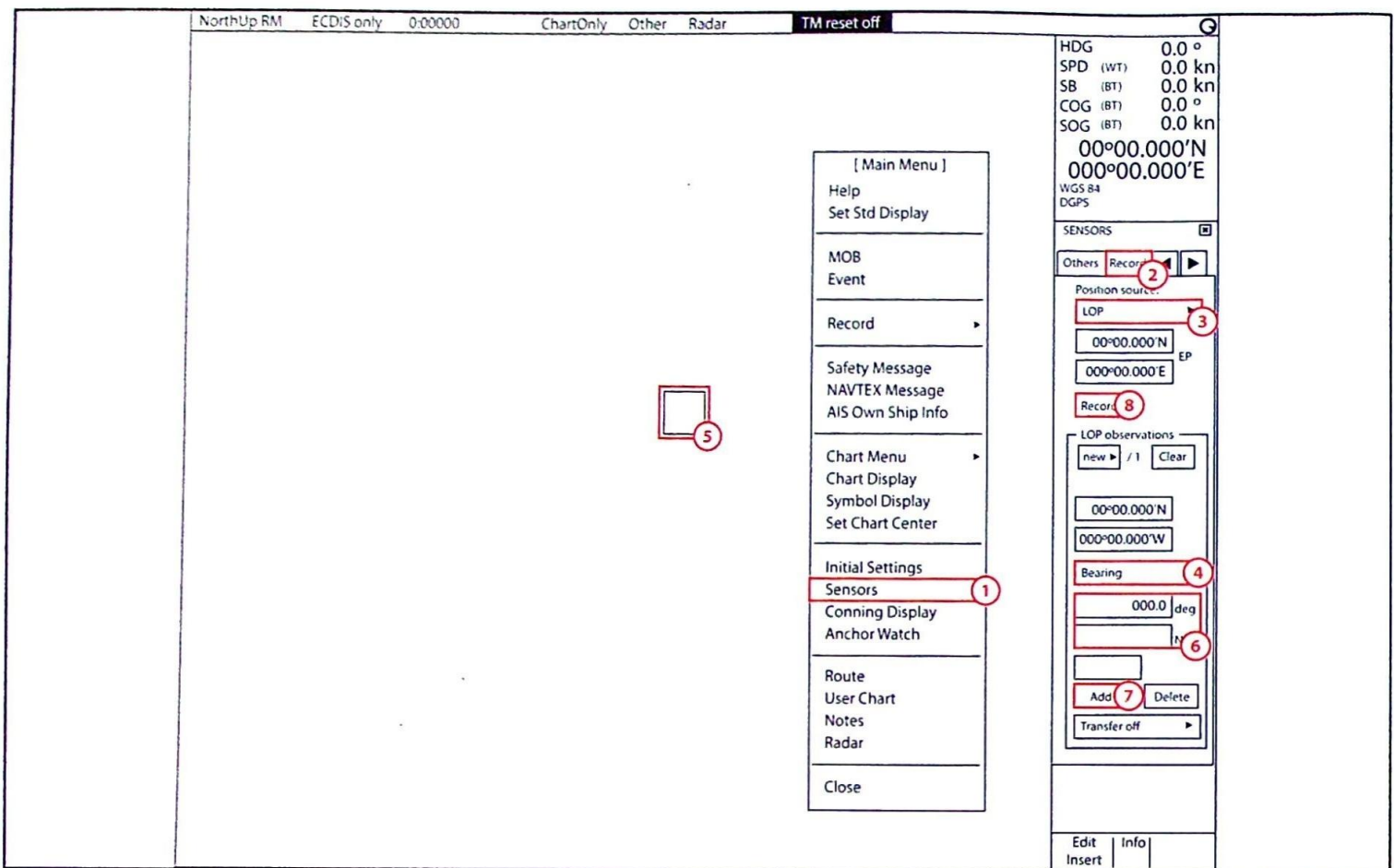
5.2 TT/AIS/Vectors



- 1 Select 'Symbol Display' from the main menu.
- 2 Select the 'General' tab and adjust settings as necessary.

- 3 Select the 'Targets' tab and adjust settings as necessary.
- 4 Click 'Save' to apply changes.

5.3 Position Fixing



- 1 Select 'Sensors' from the main menu.
- 2 Select 'Record' tab.
- 3 Ensure 'LOP' is selected.
- 4 Ensure 'Bearing' is selected.
- 5 Click on your first reference point.
- 6 Enter the bearing.
- 7 Select 'Add' to confirm first LOP; repeat steps 5 to 7 three times.
- 8 Confirm your position fix. Vessel will remain in GNSS and a fix stamp will be applied to the chart.

5.4 Logs/Playback

The screenshot shows the ECDIS interface with the following components:

- Top Bar:** NorthUp RM, ECDIS only, 0:0000, X1.2 ChartOnly, Other Radar, TM reset off.
- Main Menu (Left):** [Main Menu], Help, Set Std Display, MOB Event, Record (1), Safety Message, NAVTEX Message, AIS Own Ship Info, Chart Menu (Chart Display, Symbol Display, Set Chart Center), Initial Settings, Sensors, Conning Display, Anchor Watch, Route, User Chart, Notes, Radar.
- Record Menu (Top Center):** [Record], Go Back, Details Log, Voyage Log (2), Danger Target Log, Alert Log (3), Alert Queue, Chart Usage Log (4), Backup and Restore, Settings, Reset.
- TEXT VIEW (Center):** A window showing chart data for 01 Jan 2000 12:00, including Scale, Center position, and various parameters.
- LOG FILES - VOYAGE LOG (Bottom Center):** A table with columns: Date, Time, Type, LAT, LON, SOG/kn, COG°, HDG°, CORR°, Wind/, Wind°, DIST/NM, Depth/m, Description. It contains 6 rows of log data.
- Right Panel:** HDG 0.0°, SPD (WT) 0.0 kn, SB (BT) 0.0 kn, COG (BT) 0.0°, SOG (BT) 0.0 kn, 00°00.000'N, 000°00.000'E, WGS 84, DGPS, Route: not selected, Plan Speed kn, Plan 0.0, Route 0.0, Ch LIM m, Off track m, To WPT, Dist WOP NM, Time, Turn RAD NM, Turn rate %/min, Next WPT, UserChart, Notes, 01 Jan 2000 12:00, Local (UTC + 02:00), T DISP ON, AIS FUNC OFF, T VECT (G) 30 s, Predictor OFF, PASTPOSNT 10 min, CPA 1.0 NM 12 min, CPA AUTO act. ALL, Lost TGT alarm ALL, SINGLES 06.07 06.07, Multi Select, Mti sel, Select.

1 Select 'Record' from the main menu.

2 Details Log/Voyage Log/Danger Target Log.

3 Alert Log/Alert Queue.

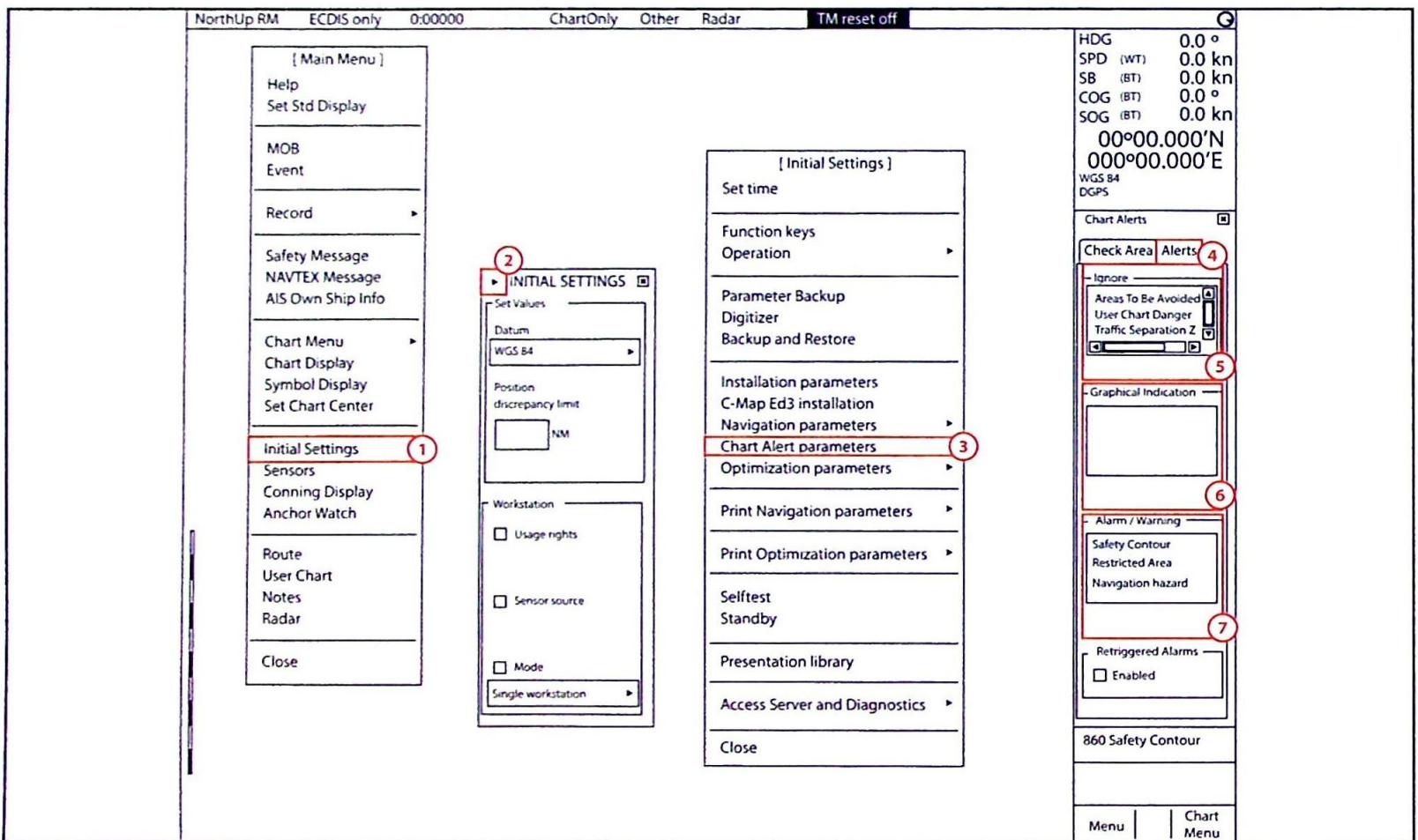
4 Chart Usage Log.

5 'Voyage Log' example - To print, move the cursor onto the triangle to show the 'Log File' menu and select 'Print Log'.

6 'Chart Usage Log' example.

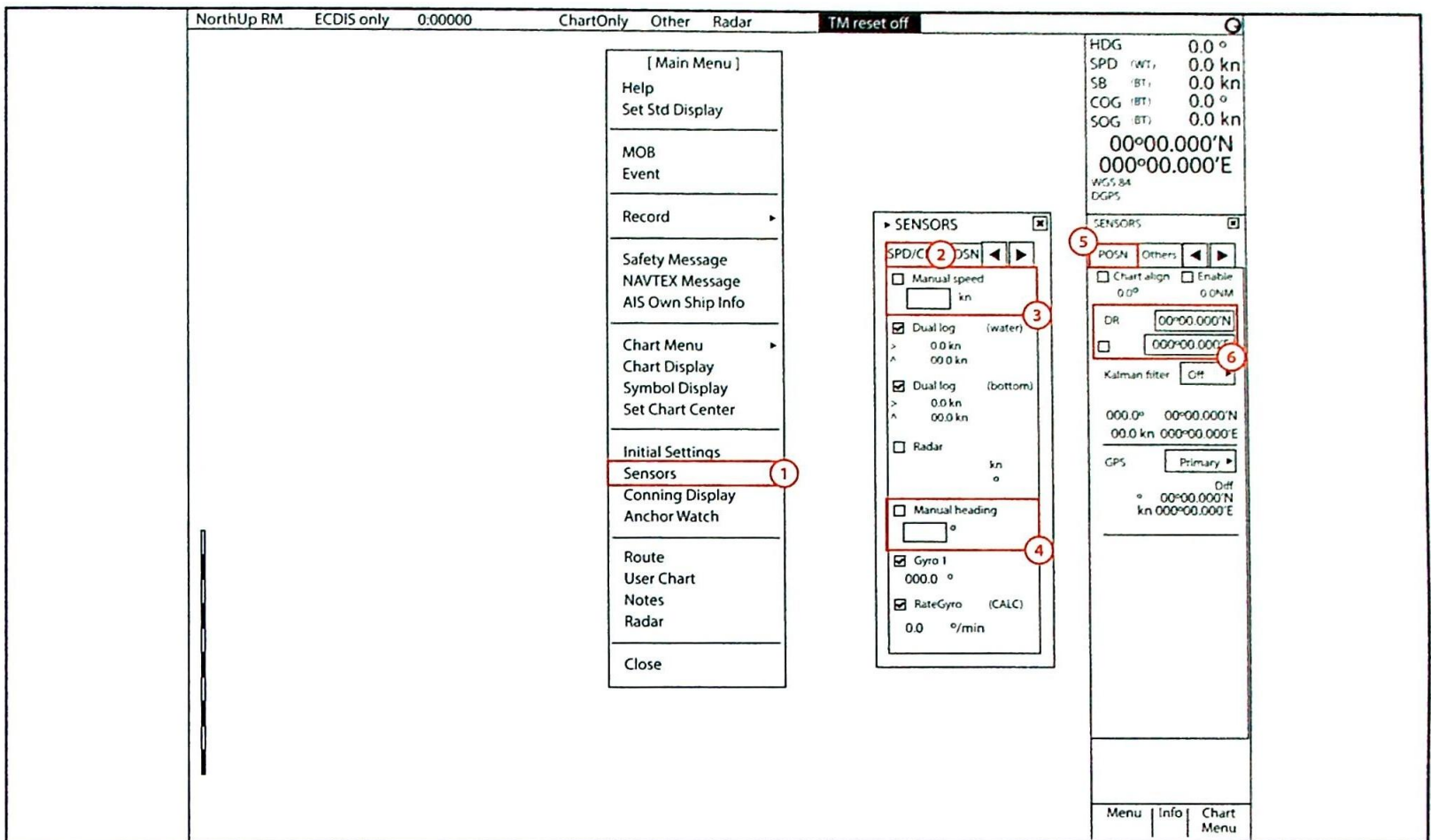
Section 6: System Settings

6.1 Warning/Alarm Configuration



- 1 Select 'Initial Settings' from the main menu.
- 2 Move the cursor onto the triangle inside 'Initial Settings'.
- 3 Select 'Chart Alert parameters'.
- 4 Select 'Alerts' tab.
- 5 'Ignore' – No visual and no audio alarm.
- 6 'Graphical Indication' – Only visual alarm shown with yellow outline.
- 7 Alarm/Warning – Visual and audio alarm shown with red fill colour.

6.2 Position/Heading/Speed



- 1 Select 'Sensors' from the main menu.
- 2 Select 'SPD/CRS' tab.
- 3 To enable, tick the 'Manual speed' tick box and enter manual speed.

- 4 To enable, tick the 'Manual heading' tick box and enter heading.
- 5 Select 'POSN' tab.

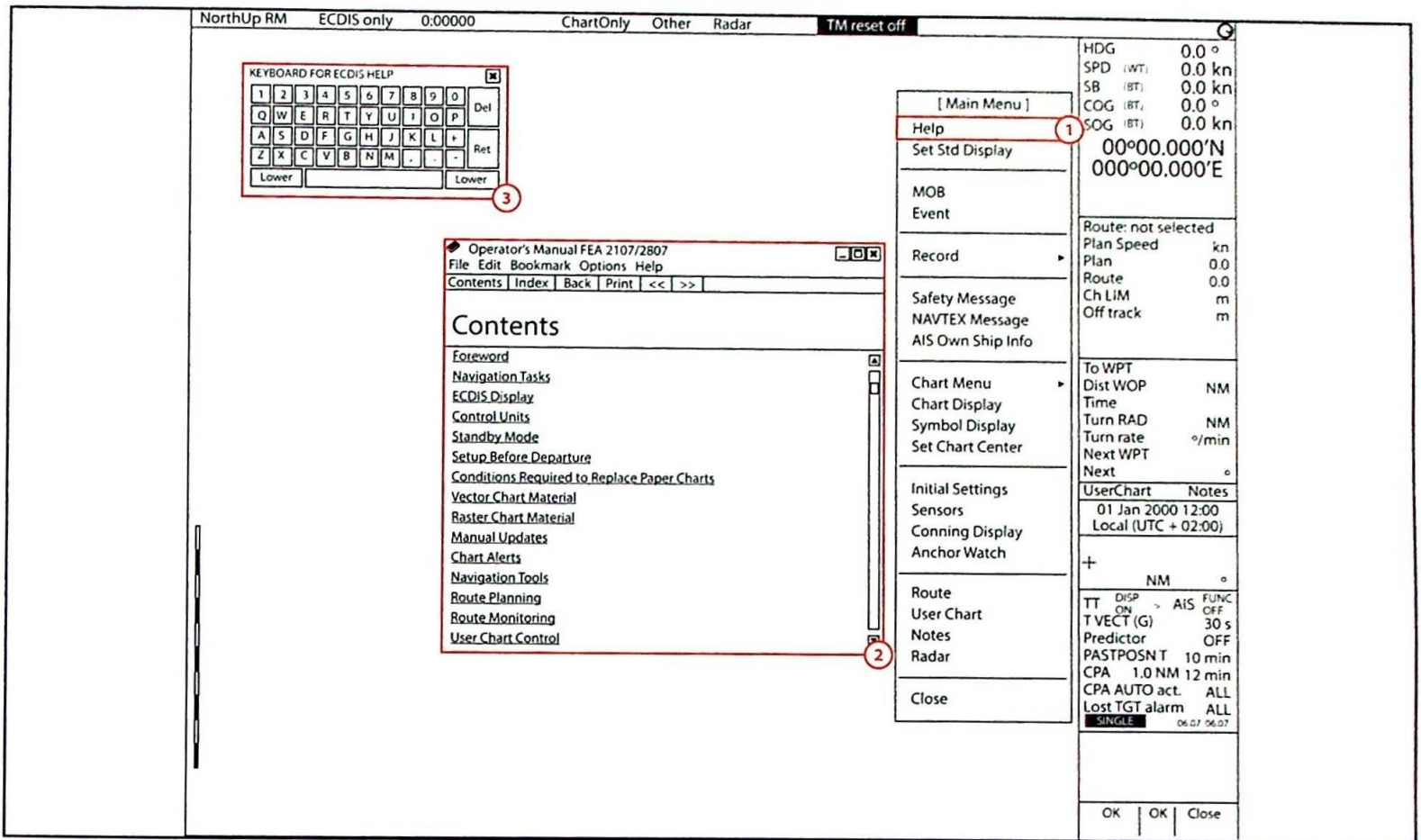
- 6 To enable, tick the 'DR' tick box and enter position.

6.3 Emergency Menu

1 From the main menu or from the control unit, you can add 'MOB'.

2 MOB marker.

6.4 Manual/About



1 Select 'Help' from the main menu.

2 Operator's Manual.

3 Keyboard for ECDIS help.

4. FURUNO FMD 3100/3200/3300 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Status Bar		
	Operating Mode – ECDIS/Conning		OTHERS – Standby/Playback
	NAVI – Voyage Navigation mode		Manage Profiles
	CHARTS – Chart maintenance mode		Chart Scale
	PLAN – Voyage planning mode		
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Overlay/Nav Tools		
	TT/AIS		Predictor
	Echo		Anchor Watch
	PI Lines		UKC
	Look-ahead		EBL 1/2 VRM 1/2
	Rings		AIS FILTER (ON/OFF)
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart INFO		DISP Settings
	Chart Legend		Basic Settings
	Viewing Dates		Chart Display
	Chart 1		Symbol Display
	DISP		Chart Alert
	Log		Scale min (ON/OFF)
	Palette		Accuracy
	Brilliance		AIS Outlines (ON/OFF)
	MOB		Positions Events (ON/OFF)
	Screenshot		Ship Vectors (ON/OFF)
	Undo		AIS Label (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	PLAN		NAVI
	Planning		Voyage
	User Chart		MSG
	Report		Mini Conning
	SAR		Weather Overlay
	Optimize		

FURUNO FMD – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

NAVI	Route Information Box
	Right click
	Select Route
	Unselect Route
XTD	Move to Plan
	Monitor User Chart
	Monitor INFO
	Stop Monitor

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

CHARTS	
Auto Import	License
Manage Charts	Public Key
Cell Status	System
ENC User Permit	

8. System/Local Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensor	Menu/General
HDG	Ship and Route Parameters
SPD	Navigation Parameters
COG/SOG	Cost Parameters
POSN	Route Information
Other Sensor	
Filter Status	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alarms	
Alarms	Look Ahead
Prompts	Mute Settings
Chart Dangers	
Ahead	
Time set appropriate value	
DIST set appropriate value	
Width set appropriate value	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Status Bar	Log
About	Update Log
User Settings	Event Log
Settings	NAV Log
Date	Target Log

11. ECDIS Operator's Manual

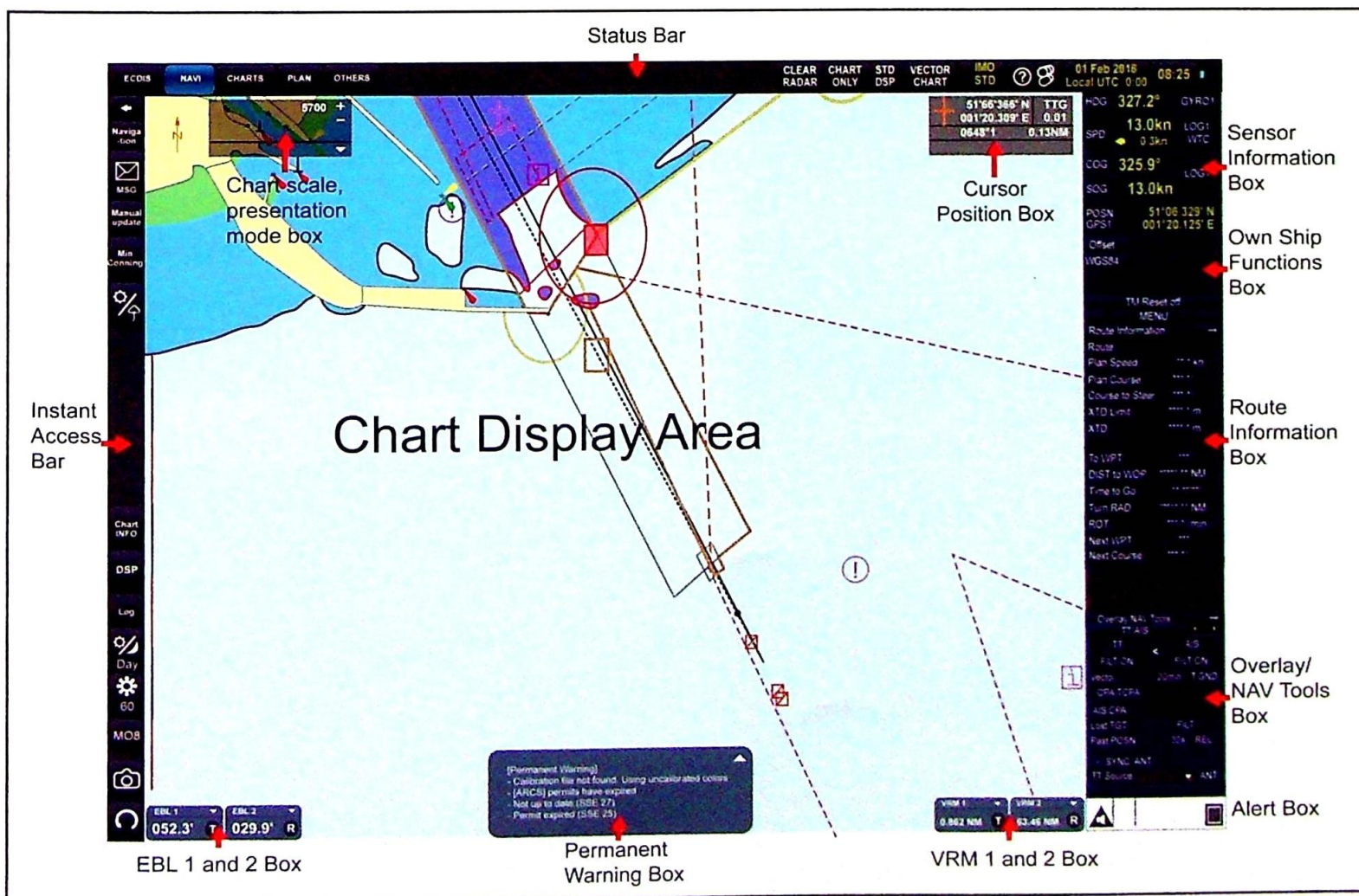
Locate the system's operator's user guide for referencing and help.

Status Bar
Manual

FURUNO FMD 3100/3200/3300

Key FURUNO FMD 3100/3200/3300 ECDIS Menu Functions

1.	Viewing chart catalogue	CHARTS>Manage Charts
2.	Configuration of Ship's Maximum Speed, Draught and ROT	Menu>Ship and Route Parameters>Ship and Route
3.	Settings Chart Priority	Status Bar>Vector/Raster Chart
4.	View the latest update number installed	Right click>Chart Legend
5.	Radar Image Overlay	Overlay/Nav Tools>Echo
6.	View information on charted objects and view additional text	Right click>Pick Report
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Menu>Chart Alert
8.	Input a User Chart Object	PLAN>Planning>User Chart
9.	Input a Manual Update	NAVI>Manual update
10.	Turn the ship outline on	Menu>Symbol Display>General
11.	Configure the Look-Ahead (Anti-grounding Cone)	Overlay/Nav Tools>Look-Ahead
12.	Configure Velocity Vectors	Menu>Symbol Display>General
13.	Configure Ship's Track	Menu>Symbol Display>Tracking
14.	View past Alarms and Warnings	Alert Box>Alert List
15.	Input a Visual or Radar Fix	Log>Event log>POSN Event



HDG **327.2°** GYRO1
 SPD **13.0kn** LOG1
 ← 0.3kn WTC
 COG **325.9°** LOG1
 SOG **13.0kn**
 POSN **51°06.329' N**
 GPS1 **001°20.125' E**

Offset
 WGS84
 TM Reset off

MENU

Route Information →
 Route :
 Plan Speed : **.* kn
 Plan Course : ***.*°
 Course to Steer : ***.*°
 XTD Limit : ****.* m
 XTD : ****.* m
 To WPT : ***
 DIST to WOP : *****.** NM
 Time to Go : **.*
 Turn RAD : *****.** NM
 ROT : ***.*°/min
 Next WPT : ***
 Next Course : ***.*°

Overlay/NAV Tools →
 TT/AIS
 TT AIS
 FILT ON < FILT ON
 Vector 20min T.GND
 CPA/TCPA
 AIS CPA
 Lost TGT FILT
 Past POSN 30s REL
 ✓ SYNC. ANT
 TT Source: ▼ ANT

 171 Crossing Safety... 

Sensor Information

Own Ship Functions

Menu

Route Information

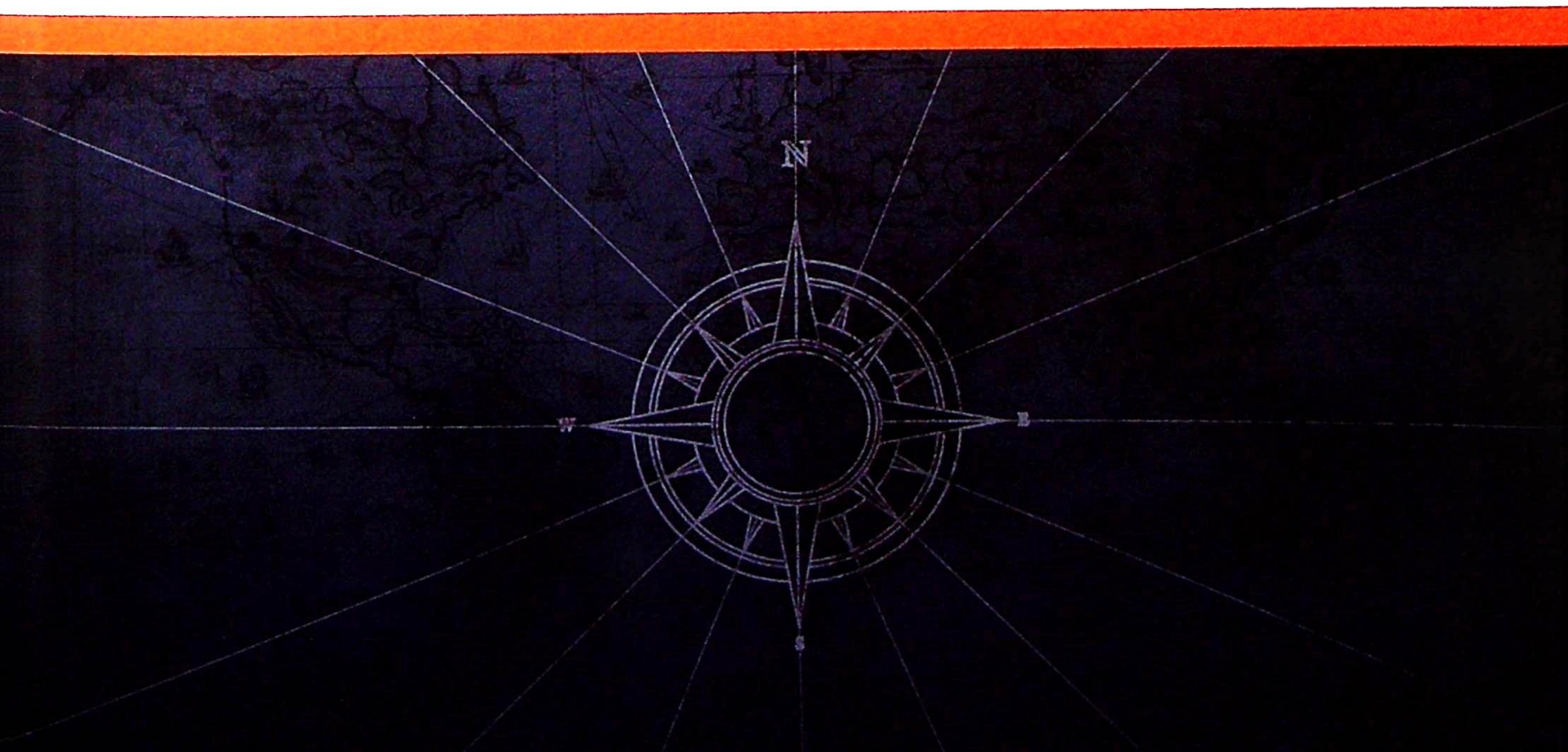
Overlay/Nav Tools

Alert Box

FURUNO

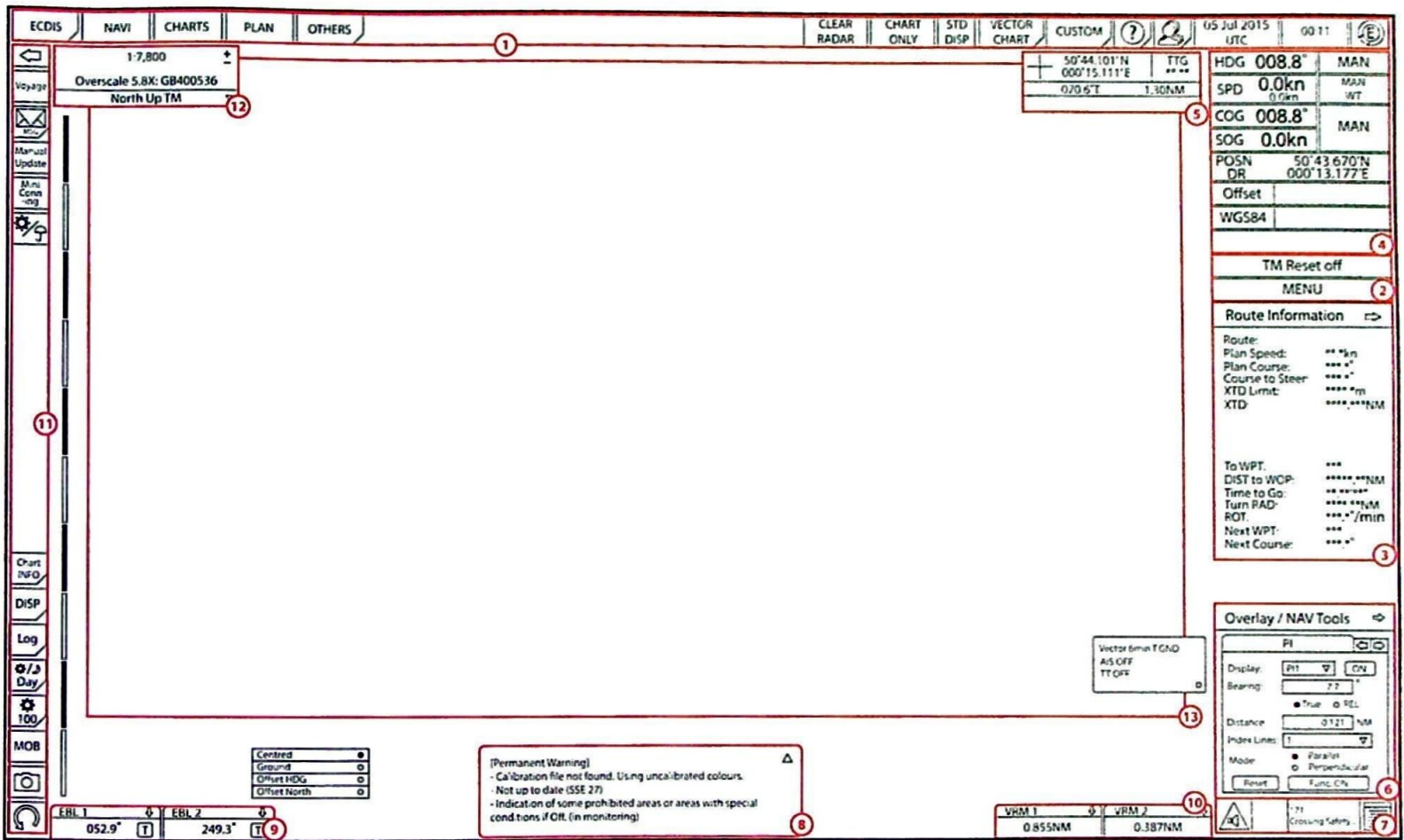
FMD 3100/FMD 3200/FMD 3300

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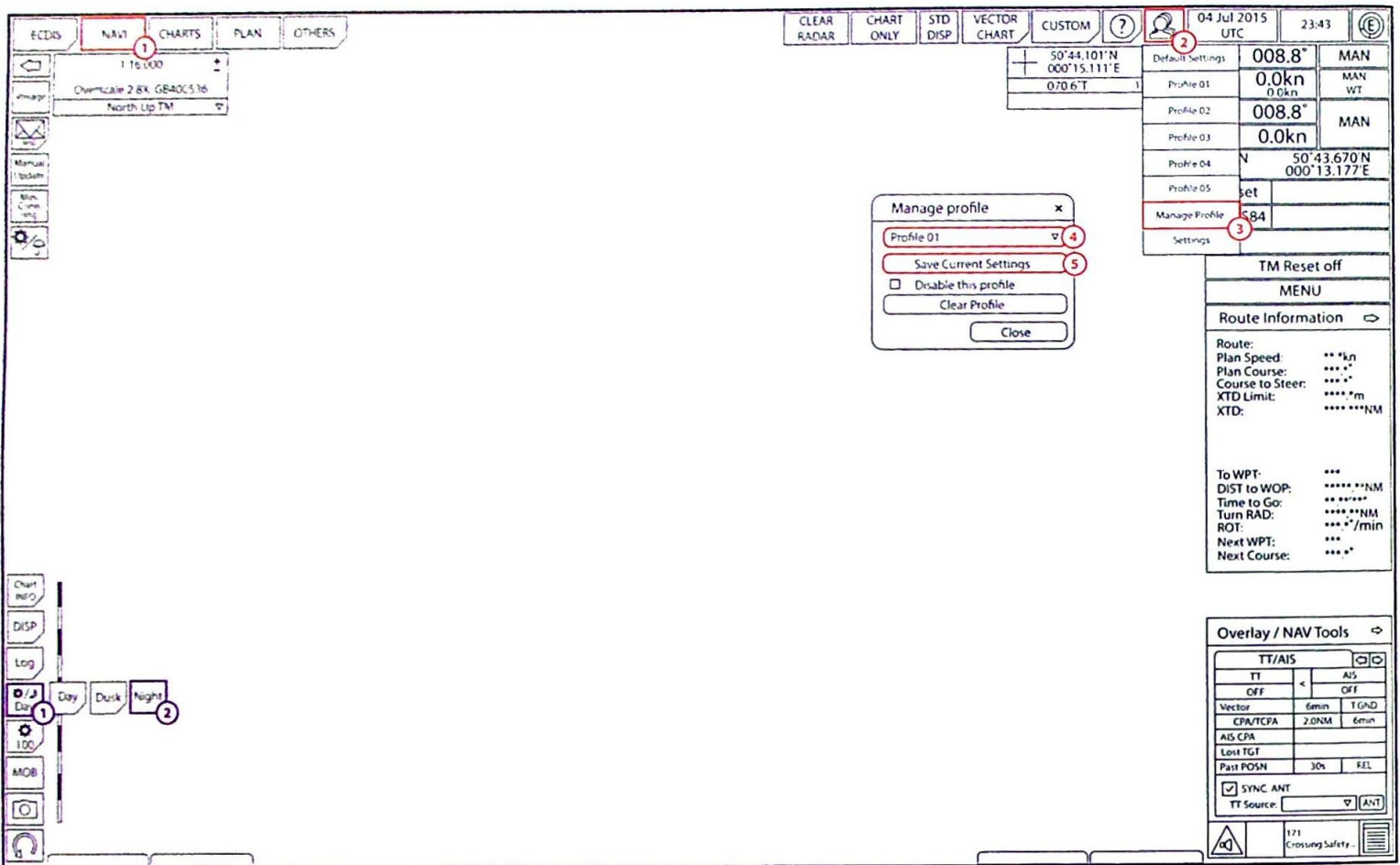
Section 1: Main Display

1.1 Screen Layout



- 1** Status bar
- 6** Overlay/NAV tools box
- 11** Instant access bar
- 2** Ownship functions
- 7** Alerts box
- 12** Chart scale. Presentation mode box
- 3** Route information box
- 8** Permanent warning box
- 13** Chart display
- 4** Sensor information
- 9** EBL 1/EBL 2
- 5** Cursor position box
- 10** VRM 1/VRM 2

1.2 Colour Palette/Profiles

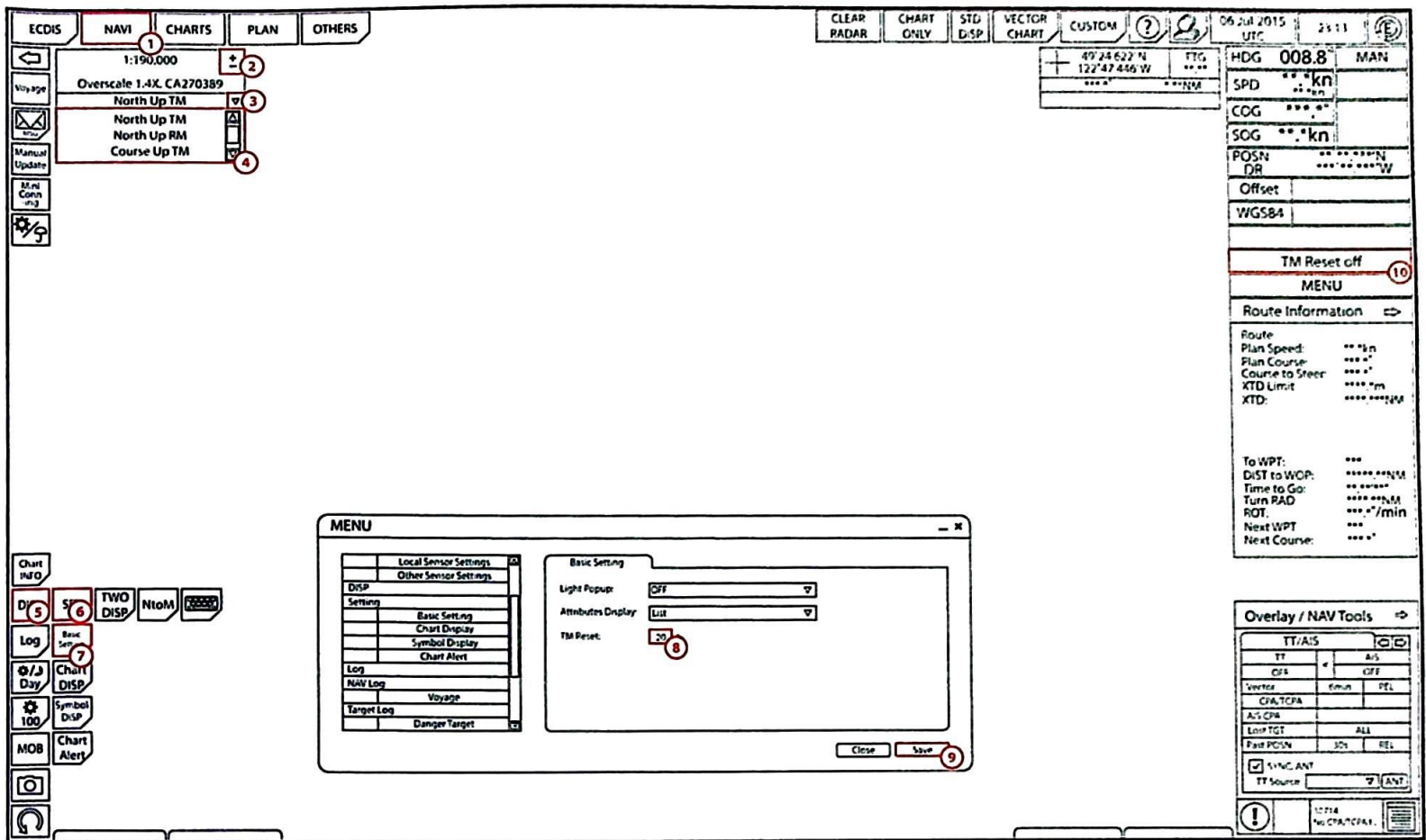


- 1 Ensure 'NAVI' is selected.
- 2 Click the 'Profiles/Settings' icon.
- 3 Click 'Manage Profile'.

- 4 Use the dropdown to select the profile you would like to save to.
- 5 Click 'Save Current Settings' to save your layers.

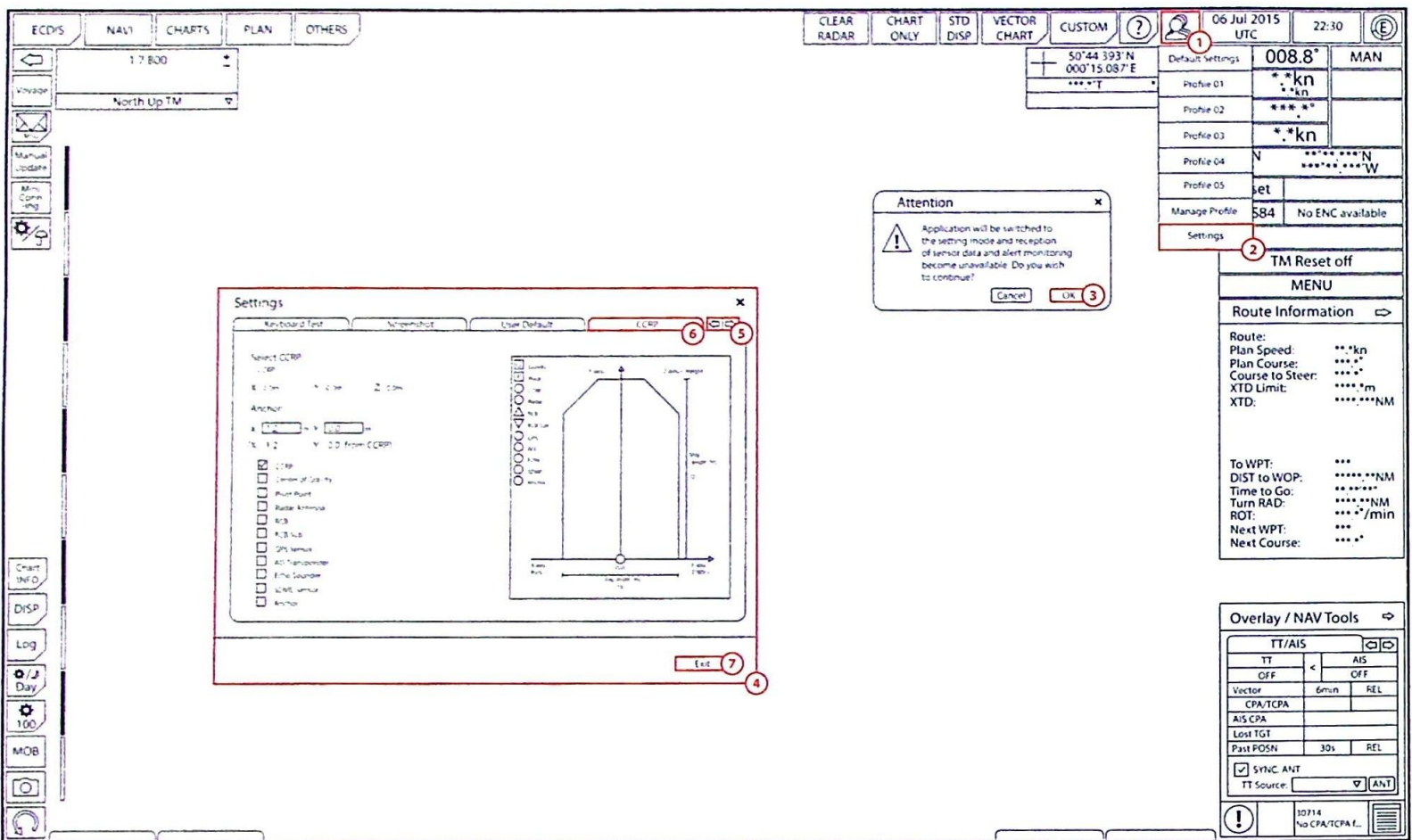
- 1 Click the day/night palette button.
- 2 Choose between day, dusk and night.

1.3 Range/Scale/Motion



- 1 Ensure 'NAVI' is selected.
- 2 Use '+' and '-' symbols to change scale/range.
- 3 Click the dropdown.
- 4 Select orientation and motion (TM or RM).
- 5 Click 'DISP'.
- 6 Click 'SET'.
- 7 Click 'Basic Setting'.
- 8 Insert a value for 'TM Reset'.
- 9 Click 'Save' to apply changes.
- 10 Ensure TM is active by selecting the 'TM Reset' button.

1.4 Setting CCRP



1 Click the 'Profiles/Settings' icon.

2 Click 'Settings'.

3 Click 'OK' when prompted.

4 The 'Settings' menu will open. (Note, the main chart screen will not be visible on your system.)

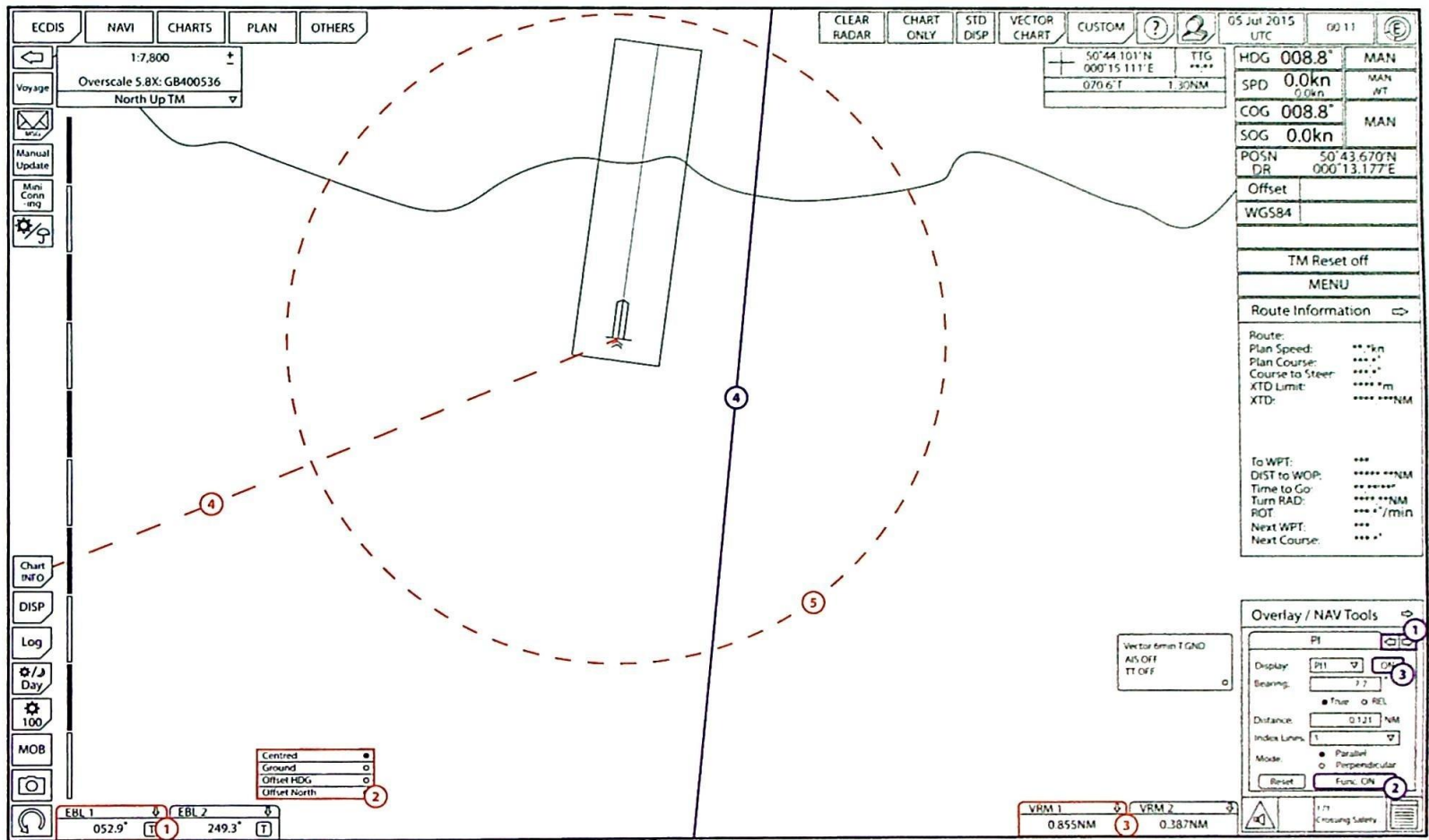
5 Use the white arrows to go to CCRP.

6 Ensure 'CCRP' is selected.

7 Click 'Exit' when you have finished reviewing CCRP settings.

Section 2: Navigation Tools

2.1 EBL/VRM/PI

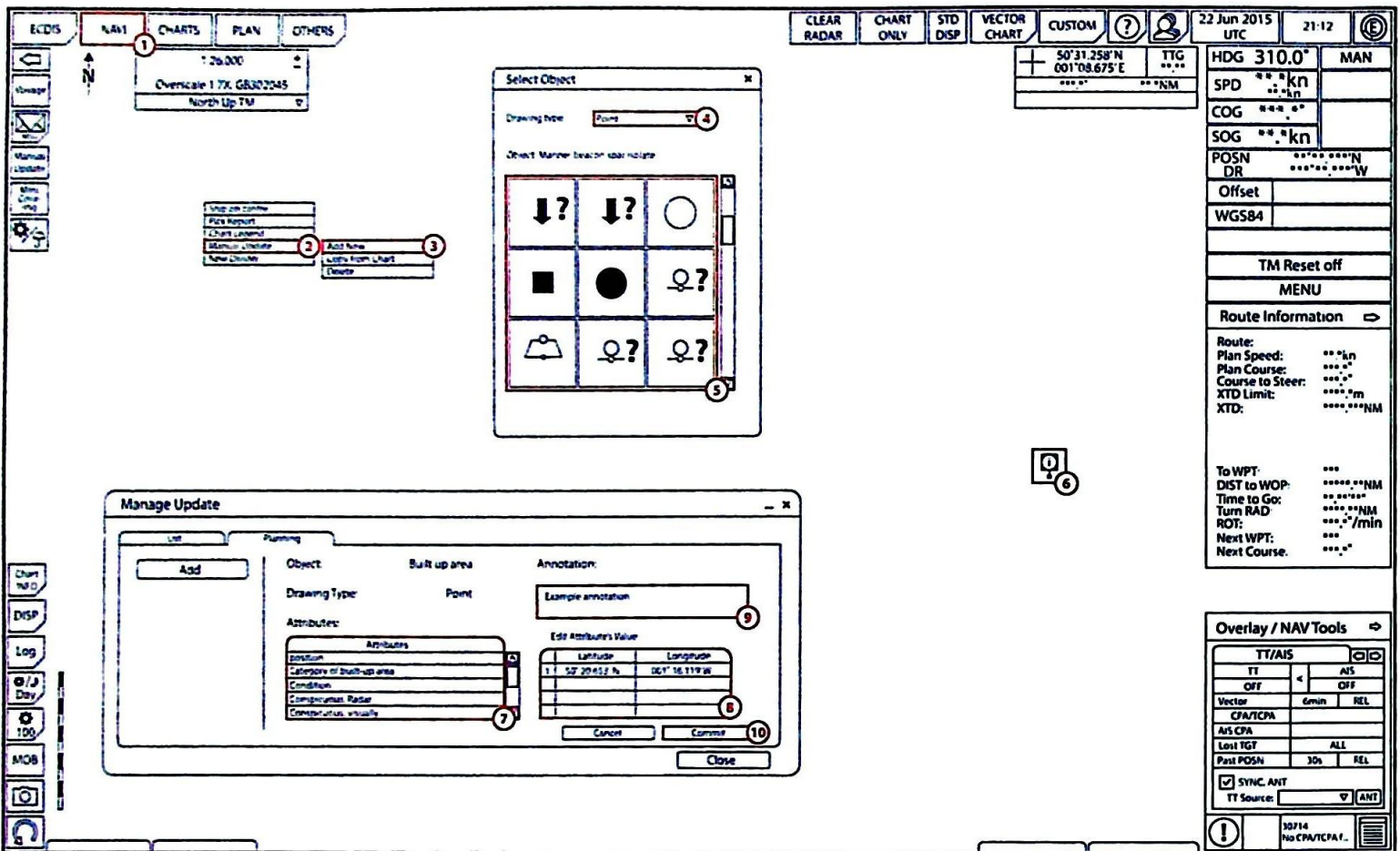


- 1 Left click to open EBL 1/EBL 2.
- 2 Right click the EBL box to select 'Centred' or 'Ground'.
- 3 Left click to open VRM 1/VRM 2.
- 4 Electronic bearing line (EBL).
- 5 VRM circle.

- 1 Select PI from the 'Overlay/NAV Tools' menu.
- 2 Turn function ON.
- 3 Select PI from the dropdown and Turn ON (up to 6 PIs can be on the chart at one time. They must each be switched on individually).

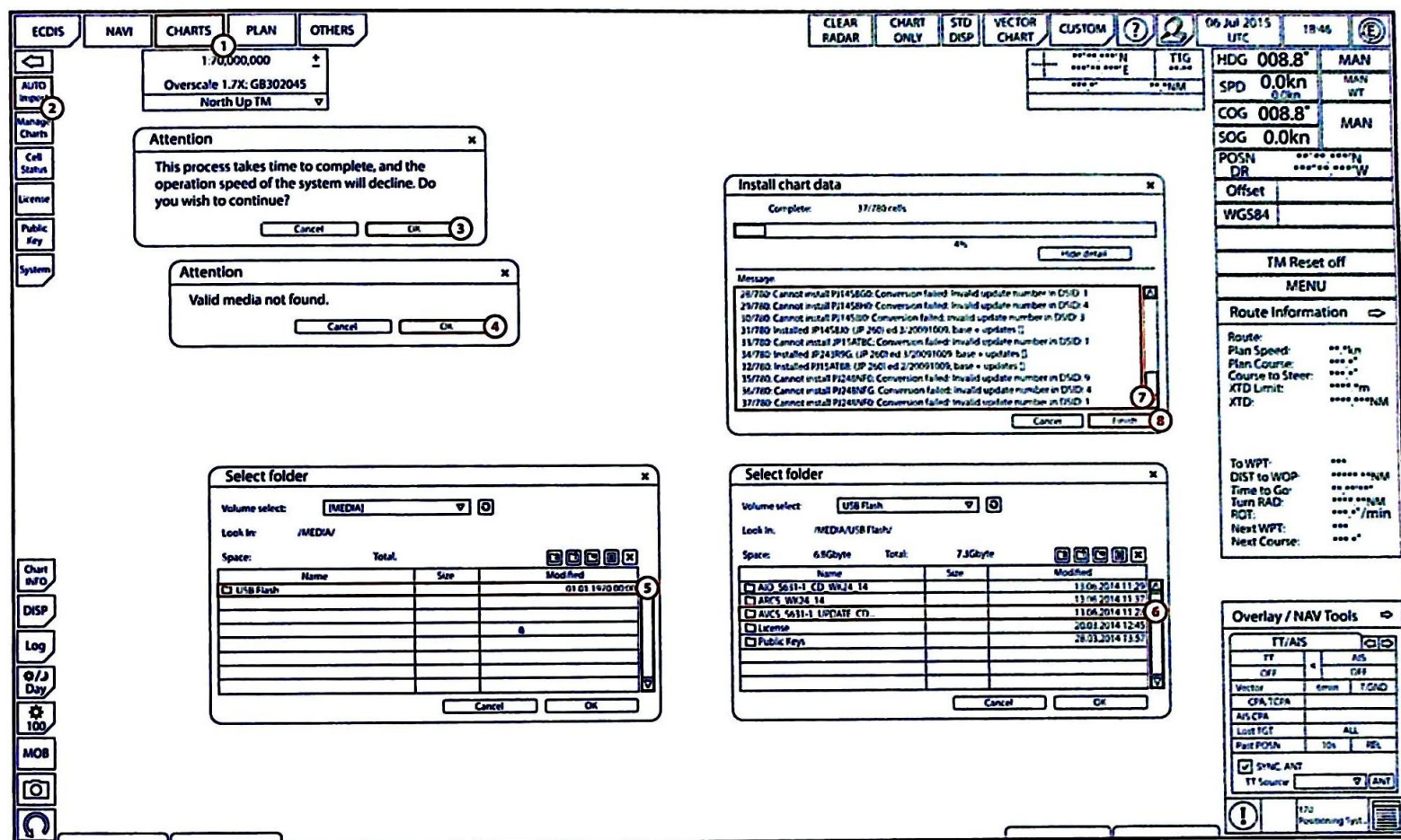
- 4 Your PI line on screen.

2.2 Manual Corrections



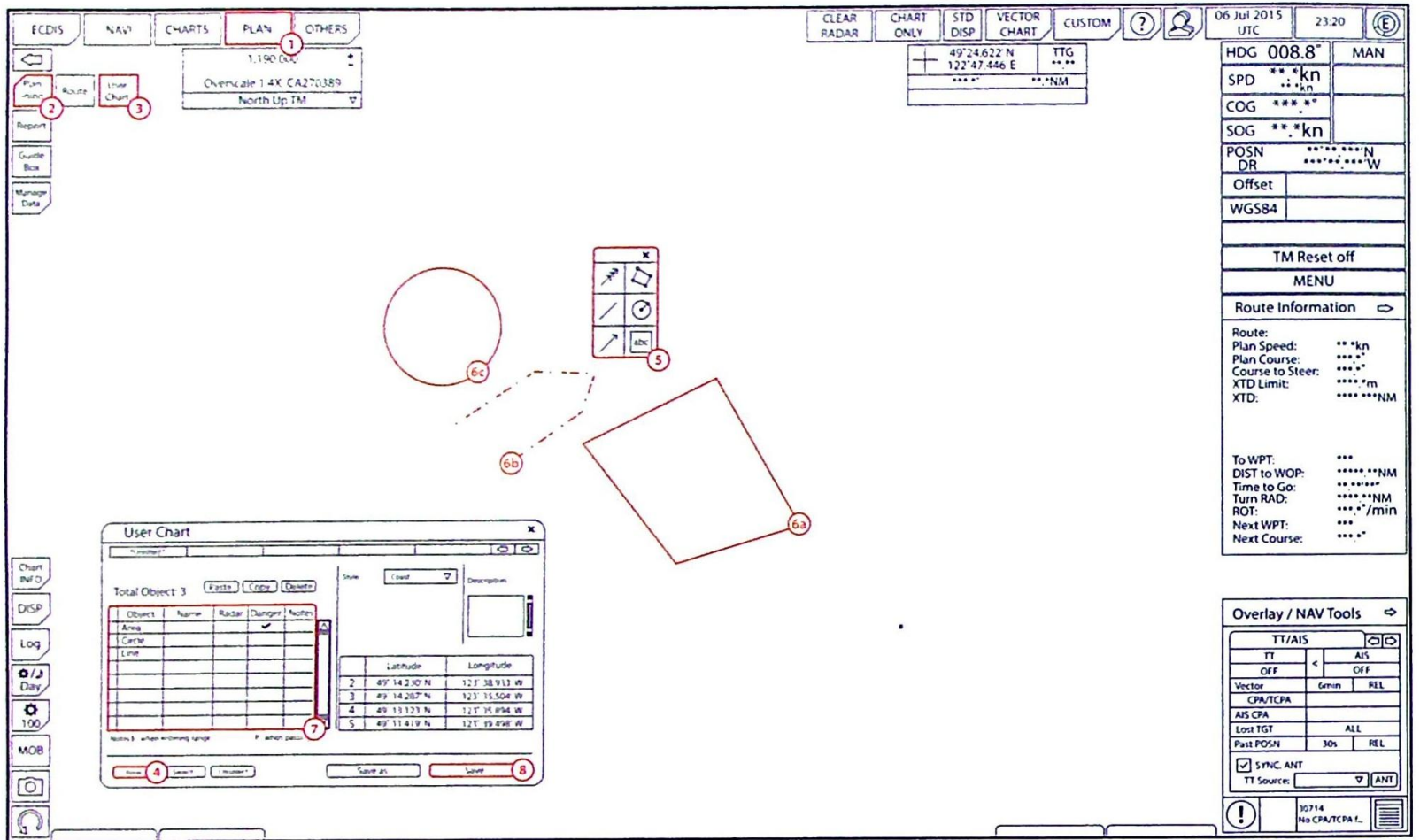
- 1 Ensure 'NAVI' is selected.
 - a Right click anywhere on the chart.
- 2 Select 'Manual Update'.
- 3 Select 'Add New'.
- 4 Use dropdown to select 'Drawing type'.
- 5 Select an object from the list available.
- 6 Left click on chart to place object.
- 7 Select an attribute to edit.
- 8 Edit attribute details.
- 9 Add annotation.
- 10 Click 'Commit' to save the manual correction.

2.3 Chart Updates



- 1 Ensure that 'CHARTS' mode is selected.
- 2 Click 'AUTO Import'.
- 3 When prompted, click 'OK'.
- 4 FURUNO will search for a CD by default. If it finds one, move to step 7. If it doesn't, you will have to click 'OK'.
- 5 Open the folder that contains your charts.
- 6 Select the charts folder that you would like to install.
- 7 The installation process will begin.
- 8 When finished, click 'Finish'.

2.4 No Go Areas/User Charts



1 Ensure 'PLAN' is selected.

2 Click 'Planning'.

3 Click 'User Chart'.

4 Click 'New'.

5 Select an object from the selection available.

6 Object examples:

a Area

b Line

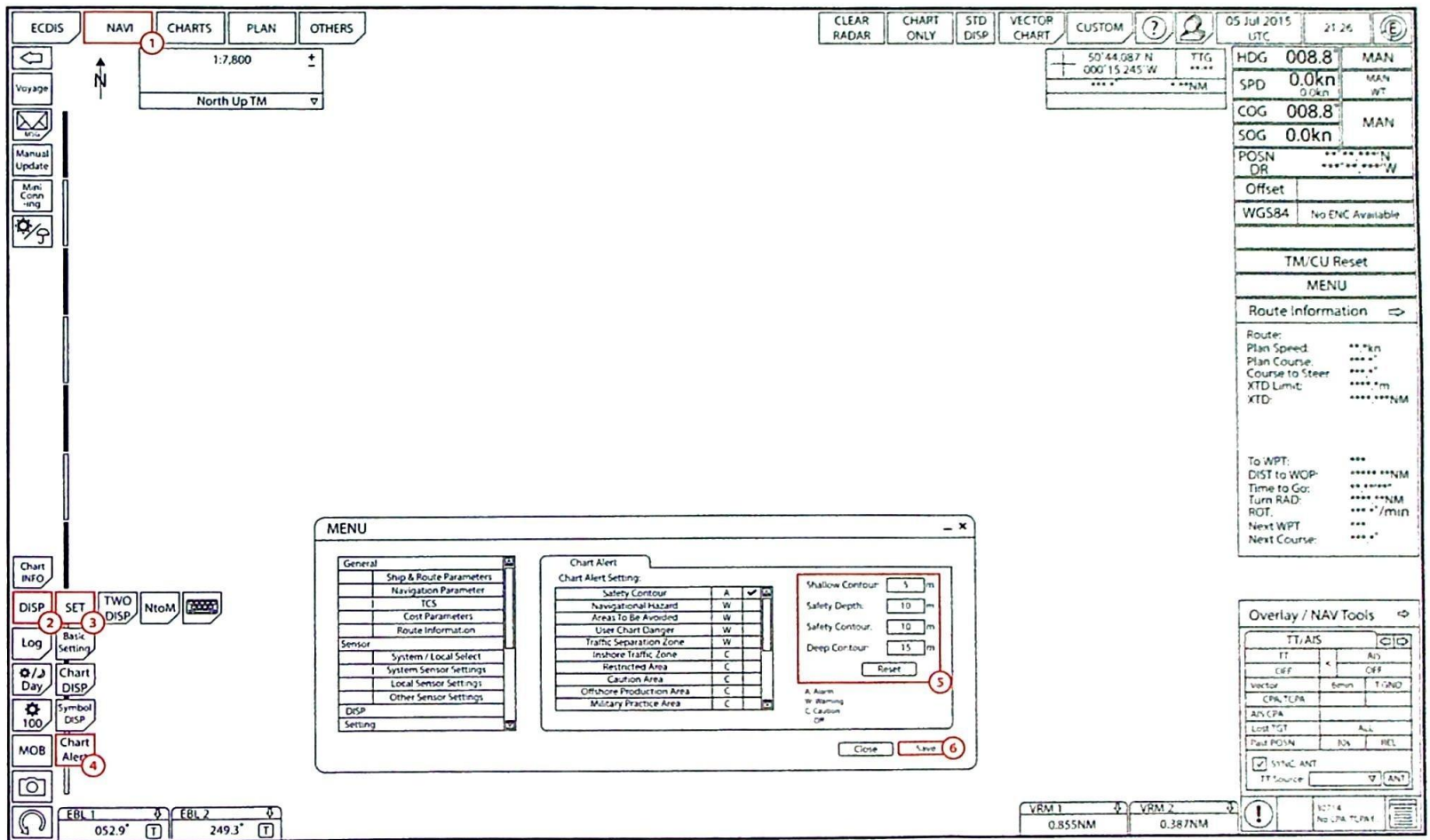
c Circle

7 Fill object details.

8 Click 'Save' to save your user chart.

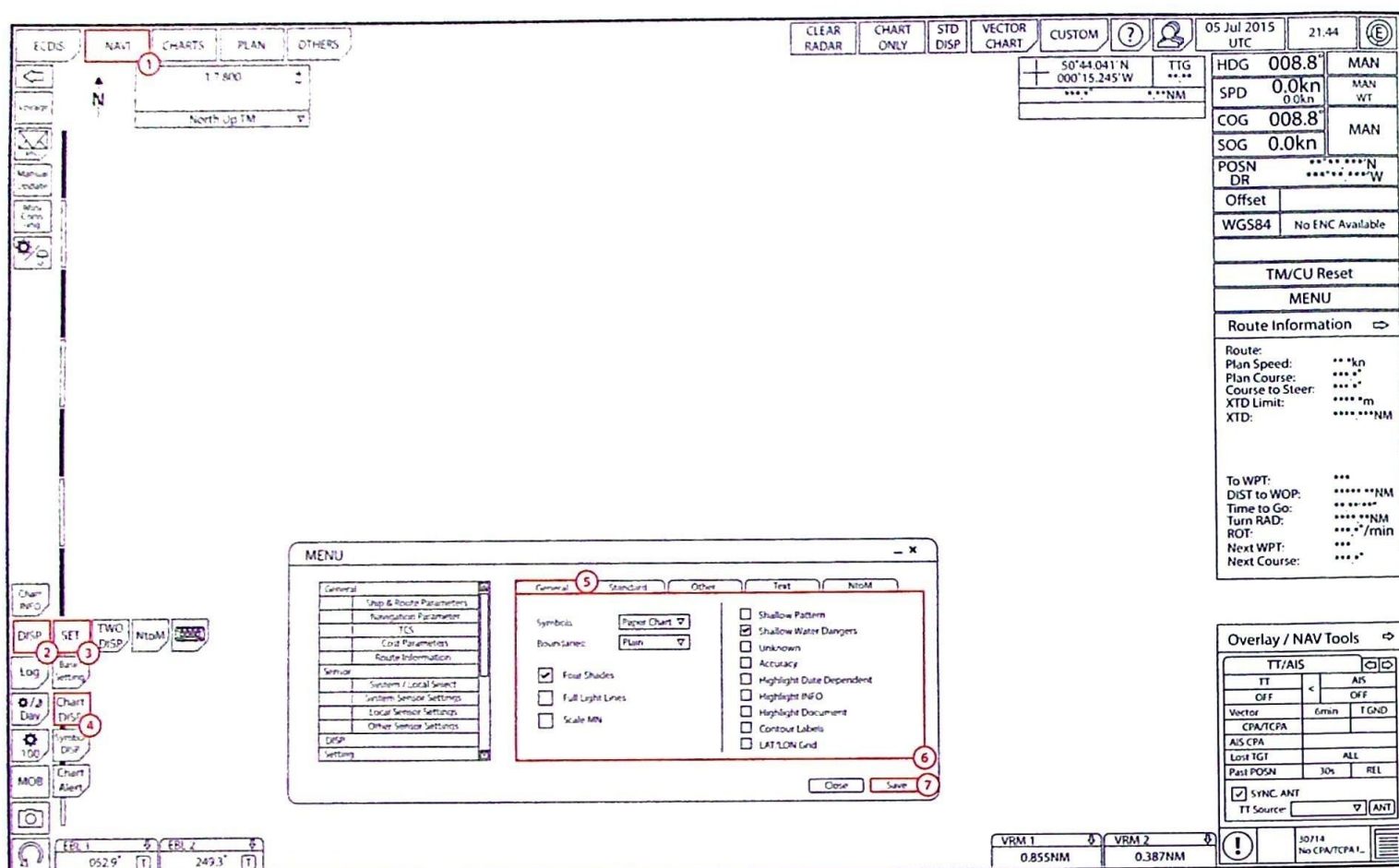
Section 3: Chart Display Settings

3.1 Safety Depth/Contour



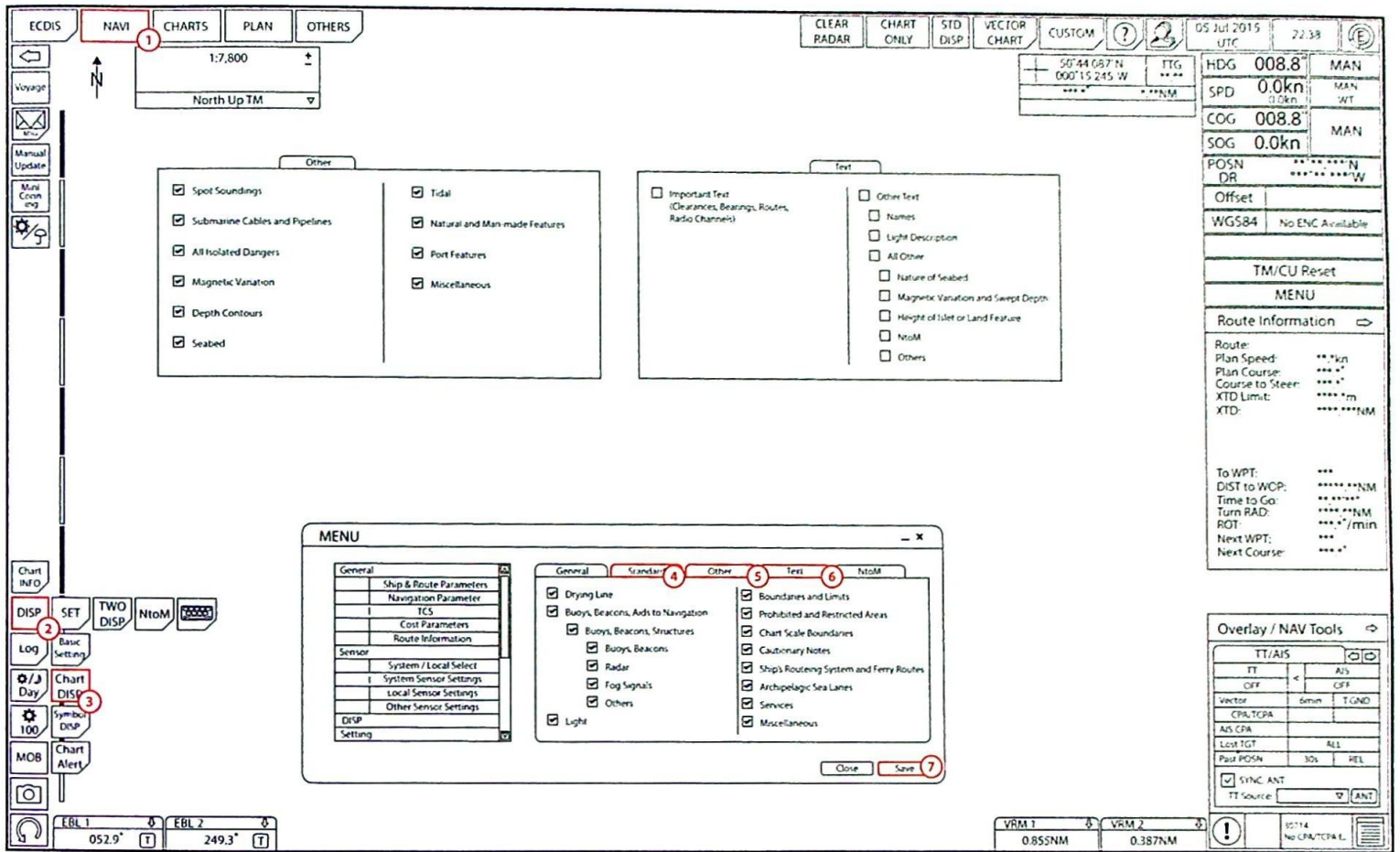
- 1 Ensure 'NAVI' is selected.
- 2 Click 'DISP'.
- 3 Click 'SET'.
- 4 Click 'Chart Alert'.
- 5 Adjust contours and safety depth, as required.
- 6 Click 'Save' to apply changes.

3.2 Display Preference Options



- 1 Ensure 'NAVI' is selected.
- 2 Click 'DISP'.
- 3 Click 'SET'.
- 4 Click 'Chart DISP'.
- 5 Ensure 'General' is selected.
- 6 Turn ON/OFF SENC options, as required.
- 7 Click 'Save' to apply changes.

3.3 Display Configuration

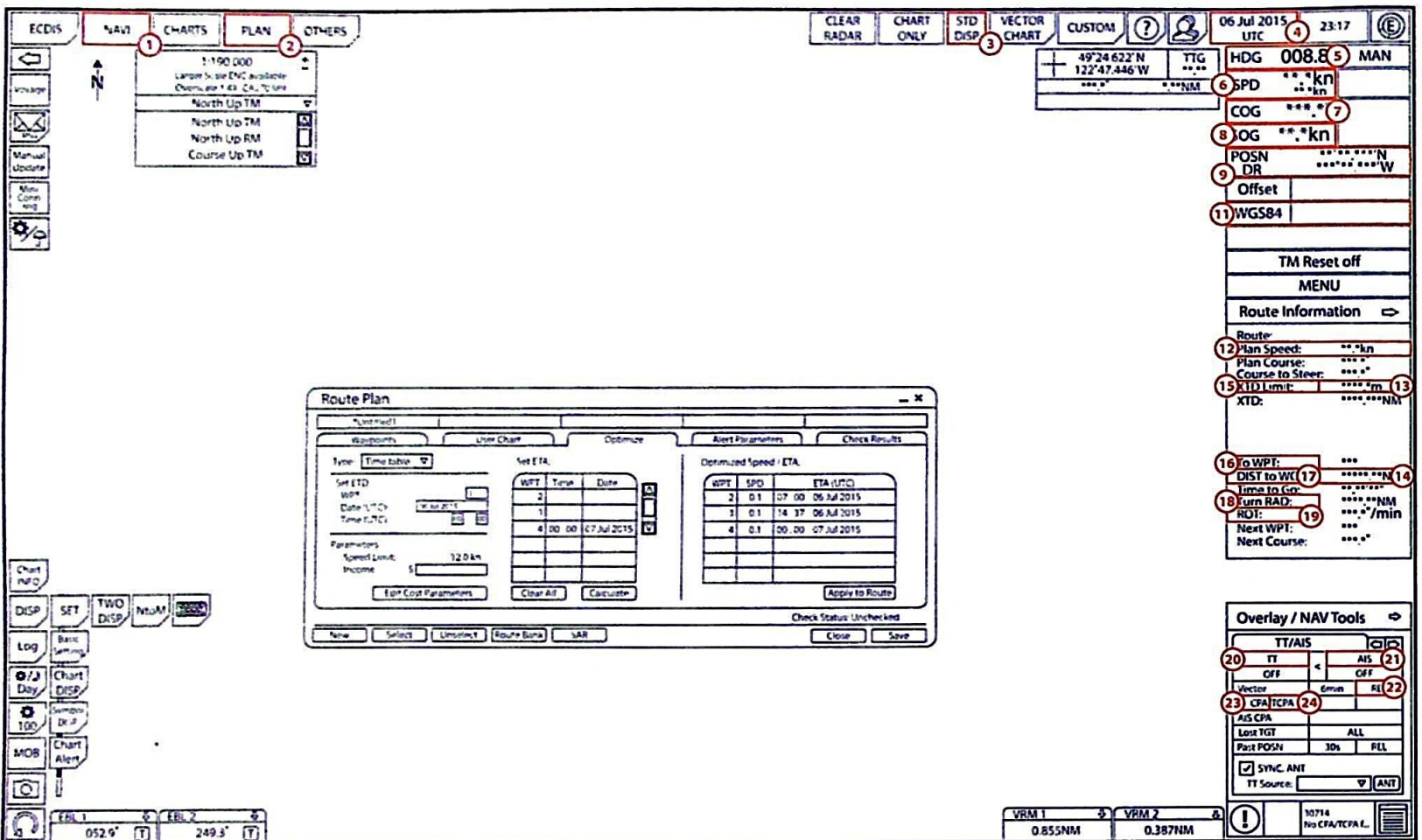


- 1 Ensure 'NAVI' is selected.
- 2 Click 'DISP'.
- 3 Click 'Chart DISP'.

- 4 Choose layers in the 'Standard' tab.
- 5 Choose layers in the 'Other' tab.

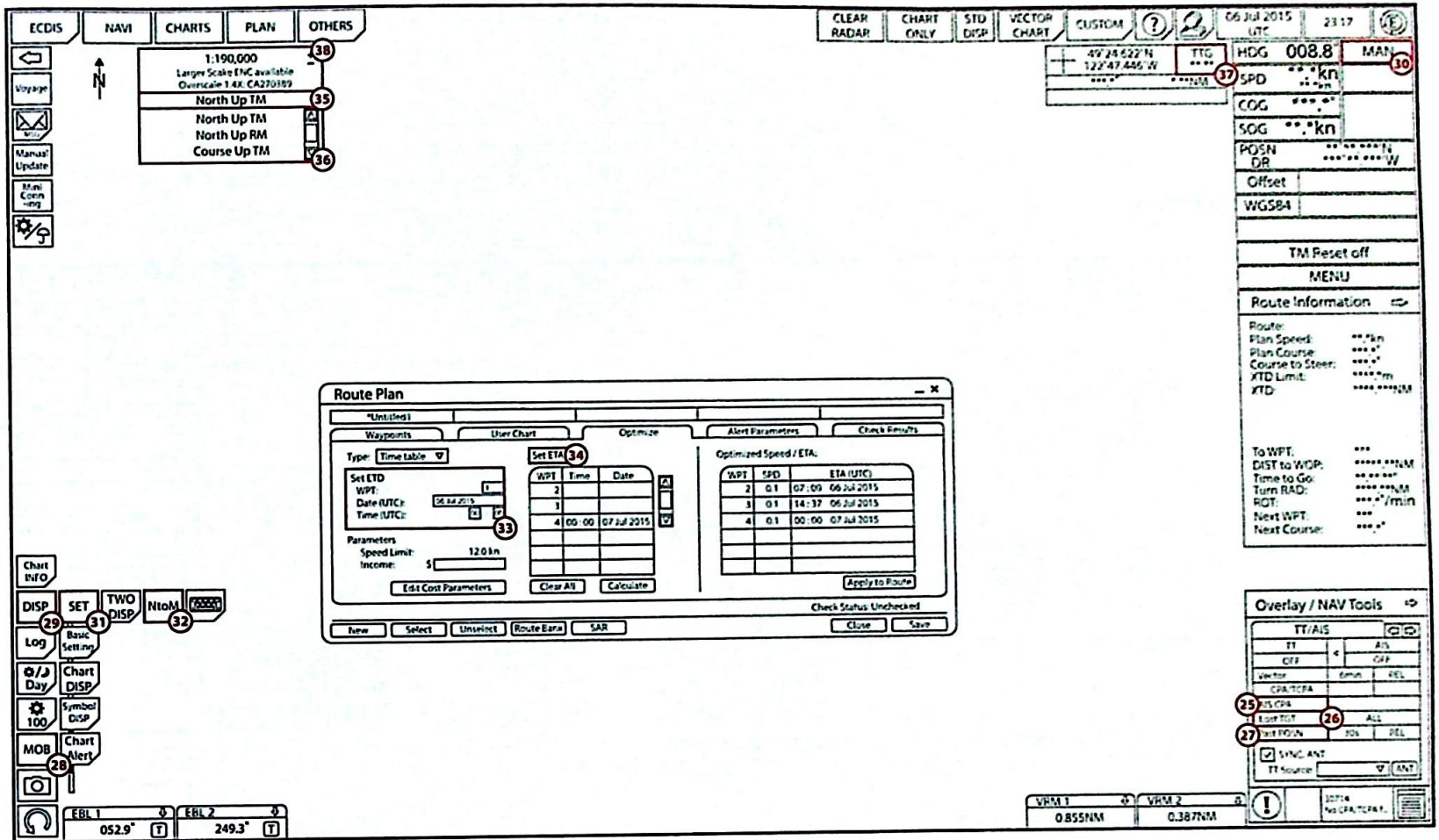
- 6 Choose layers in the 'Text' tab.
- 7 Click 'Save' to apply changes.

3.4 Abbreviations Part 1



- | | | |
|-------------------------------------|--------------------------------------|---|
| 1 Navigation | 9 Position | 17 Distance to Wheel Over Point |
| 2 Planning | 10 True Motion Reset | 18 Turn Radius |
| 3 Standard Display | 11 World Geodetic System 1984 | 19 Rate of Turn |
| 4 Universal Time Coordinated | 12 Knots | 20 Tracked Targets |
| 5 Heading | 13 Metres | 21 Automatic Identification System |
| 6 Speed | 14 Nautical Miles | 22 Relative |
| 7 Course Over Ground | 15 Cross Track Limit | 23 Closest Point of Approach |
| 8 Speed Over Ground | 16 Waypoint | 24 Time to Closest Point of Approach |

3.4 Abbreviations Part 2



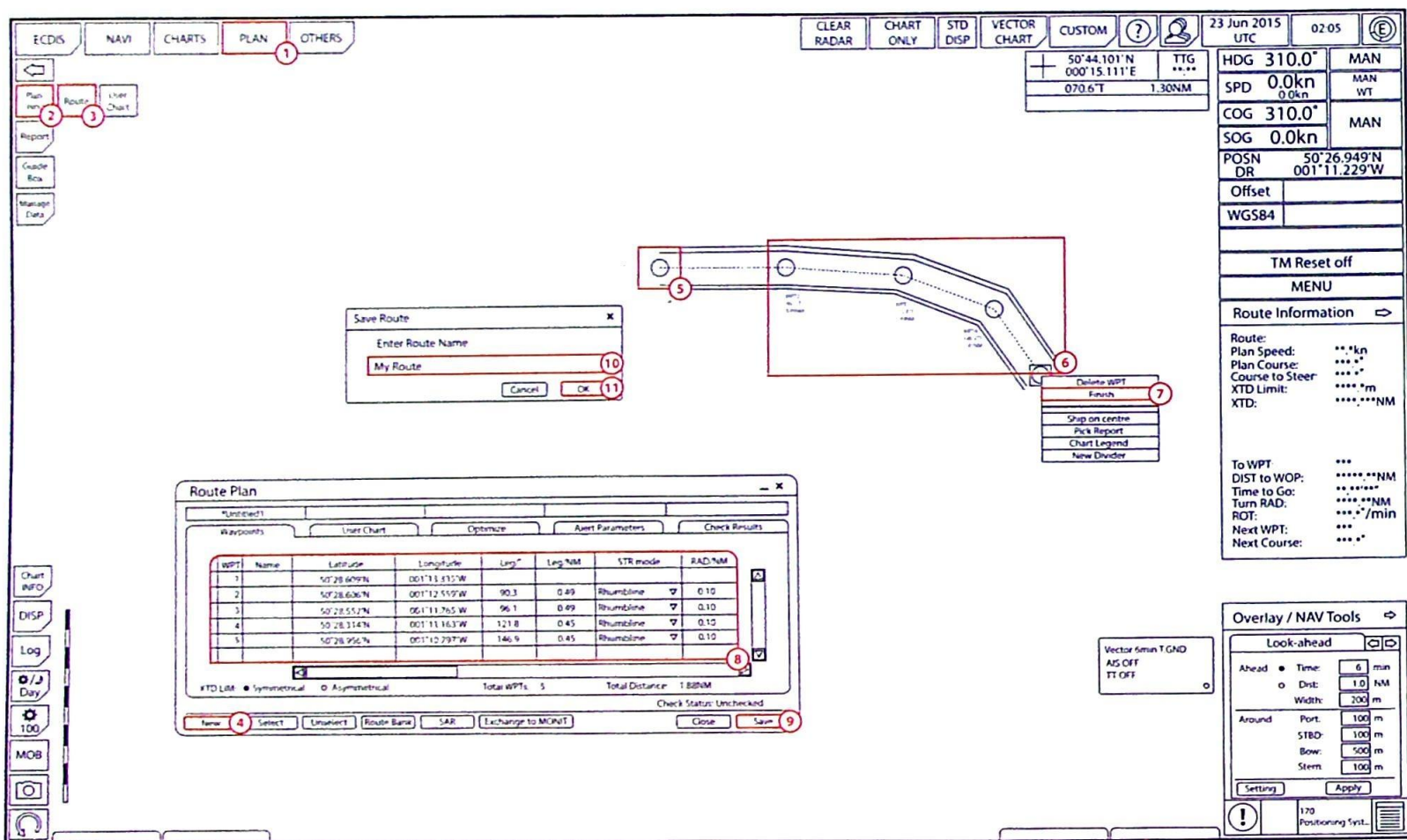
- 25 Automatic Identification System Closest Point of Approach
- 26 Lost Target
- 27 Past Position
- 28 Man Overboard
- 29 Display
- 30 Manual
- 31 Settings

- 32 Notice to Mariners
- 33 Estimated Time of Departure
- 34 Estimated Time of Arrival
- 35 True Motion
- 36 Relative Motion
- 37 Time to Go
- 38 Electronic Navigational Chart

- Additional Abbreviations
- 1 CCRP: Continuous Common Reference Point
 - 2 SENC: System Electronic Navigational Chart
 - 3 RNC: Raster Navigational Chart
 - 4 DR: Dead Reckoning

Section 4: Route Planning

4.1 Creation

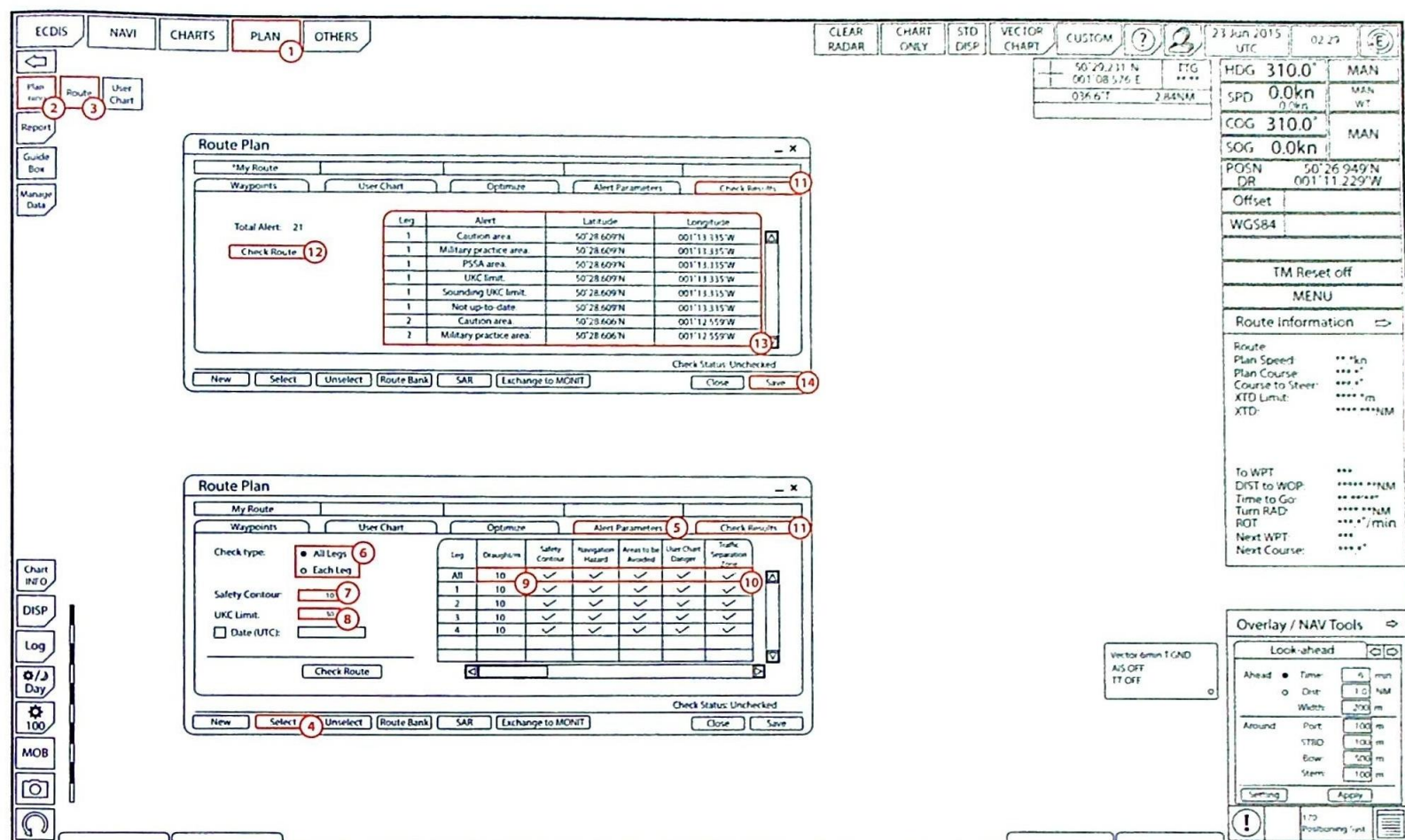


- 1 Ensure 'PLAN' is selected.
- 2 Click 'Planning'.
- 3 Click 'Route'.
- 4 Click 'New'.
- 5 Click on the chart to add the first waypoint.

- 6 Consecutive clicks will place more waypoints.
- 7 Right click on the chart and click 'Finish'.
- 8 Edit route parameters in the table.

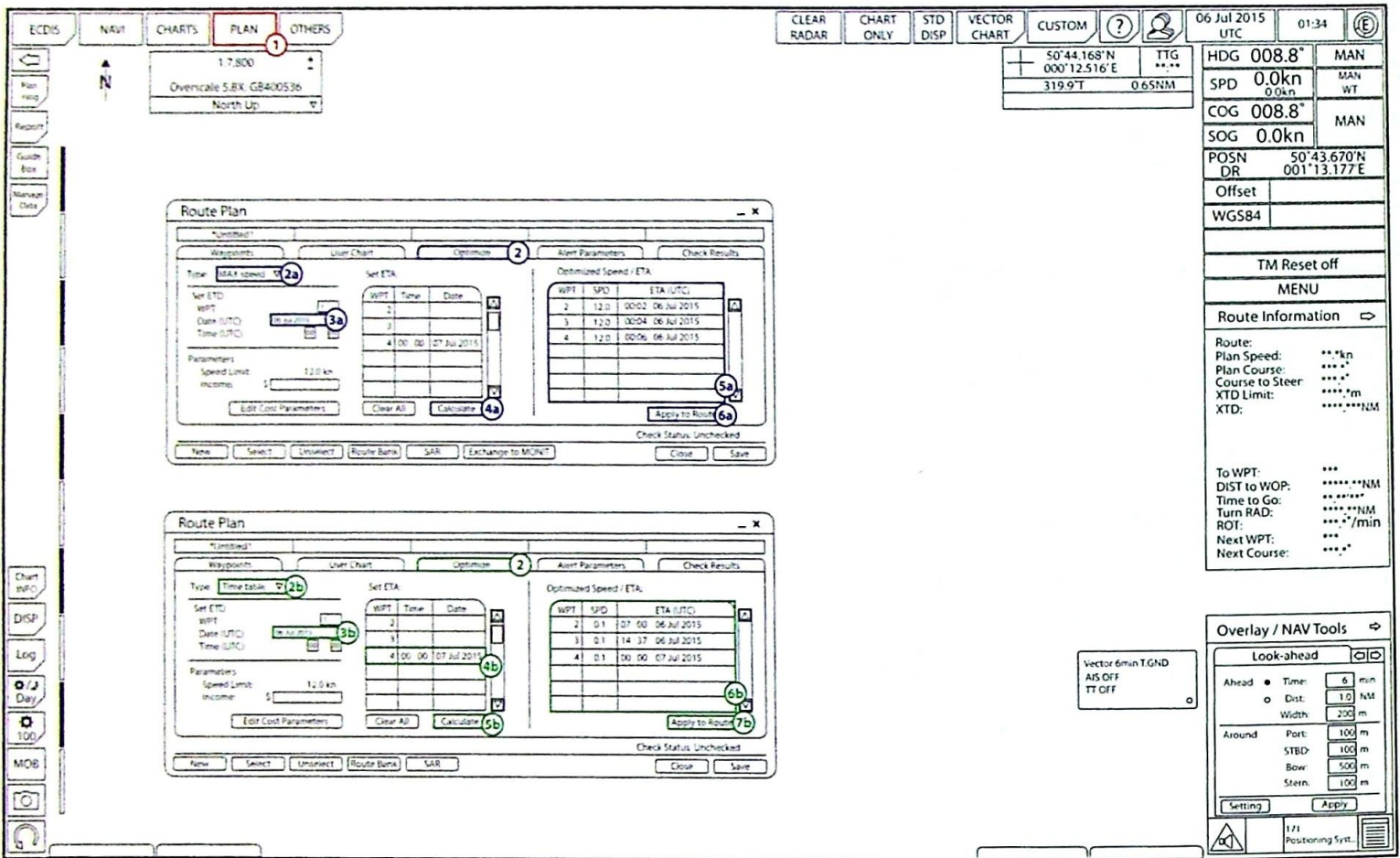
- 9 Click 'Save'.
- 10 Name your route.
- 11 Click 'OK'.

4.2 Route Checking



- 1 Ensure 'PLAN' is selected.
- 2 Select 'Planning'.
- 3 Select 'Route'.
- 4 Click 'Select' to load an existing route or follow the steps in Section 4.1 to use a new route.
- 5 Select 'Alert Parameters'.
- 6 Choose check type.
- 7 Set 'Safety Contour'.
- 8 Set 'UKC Limit'.
- 9 Set 'Draught'.
- 10 Tick the boxes for alerts you would like to be highlighted on the chart.
- 11 Select 'Check Results'.
- 12 Click 'Check Route'.
- 13 View alert list.
- 14 Click 'Save'.

4.3 Optimisation



1 Ensure 'PLAN' is selected and you are editing a route (repeat Section 4.2 to ensure you are editing a route).

2 Ensure the 'Optimize' tab is selected.

2a Select 'MAX speed' from the dropdown.

2b Select 'Time table' from the dropdown.

3a Set ETD.

3b Set ETD.

4a Click 'Calculate'.

4b Set ETA for necessary waypoints (last waypoint must contain ETA).

5a WPT speed and ETA will be displayed.

5b Click 'Calculate'.

6a Click 'Apply to Route' to apply values to actual waypoints.

6b WPT speed and ETA will be displayed.

7b Click 'Apply to Route' to apply values to actual waypoints.

4.4 Selecting Active Route

The screenshot displays the ECDIS NAVI interface. At the top, the 'NAVI' tab is selected. A toolbar on the left contains icons for Voyage, Route, Instant Track, User Chart, Monitor Info, and Stop Monitor. A 'Select Route' dialog box is open, showing a table of routes:

ID	Name	Date
19	Route 1	29 May 2015
20	Route 2	29 May 2015
21	Route 3	29 May 2015
22	Route 4	29 May 2015
23	Route 5	29 May 2015

Below the table, 'Total WPTs: 4' and 'Total DIST: 4.25NM' are displayed. The 'Monitor Information' window for 'Route: Route 5' is also open, showing a table of waypoints:

WPT	Name	Latitude	Longitude	ETA	Plan SPD
1		50°41.377'N	001°50.629'W		
2		50°41.360'N	001°47.696'W		20.0
3		50°41.403'N	001°44.175'W		20.0
4		50°42.040'N	001°46.704'W	18.39 29 May 2015	20.0

The 'Monitor Information' window also displays 'Distance: 27.56NM' and 'Departure: 17:17 29 May 2015'. A 'Check ETA' button is visible. The right-hand panel shows ship status: HDG 310.0°, SPD 0.0kn, COG ***°, SOG **.*kn, POSN DR 50°43.914'N 001°03.440'W. A 'MENU' section includes 'Route Information' and 'Overlay / NAV Tools'.

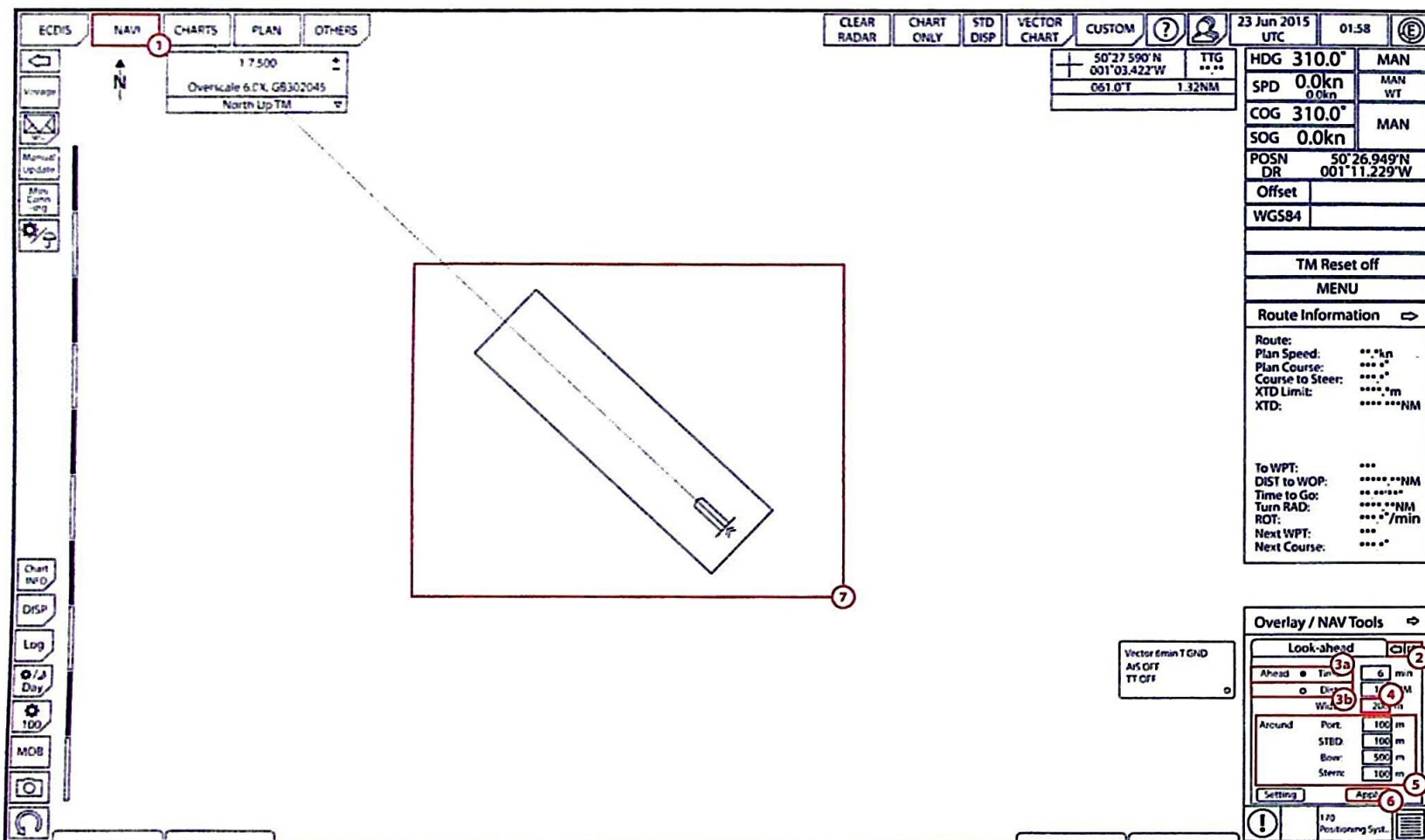
- 1 Ensure 'NAVI' is selected.
- 2 Select 'Voyage'.
- 3 Select 'Route'.

- 4 Open 'Select'.
- 5 Click on a route to highlight it.
- 6 Select 'Open'.

- 7 Monitor information.

Section 5: Route Monitoring

5.1 Look-Ahead

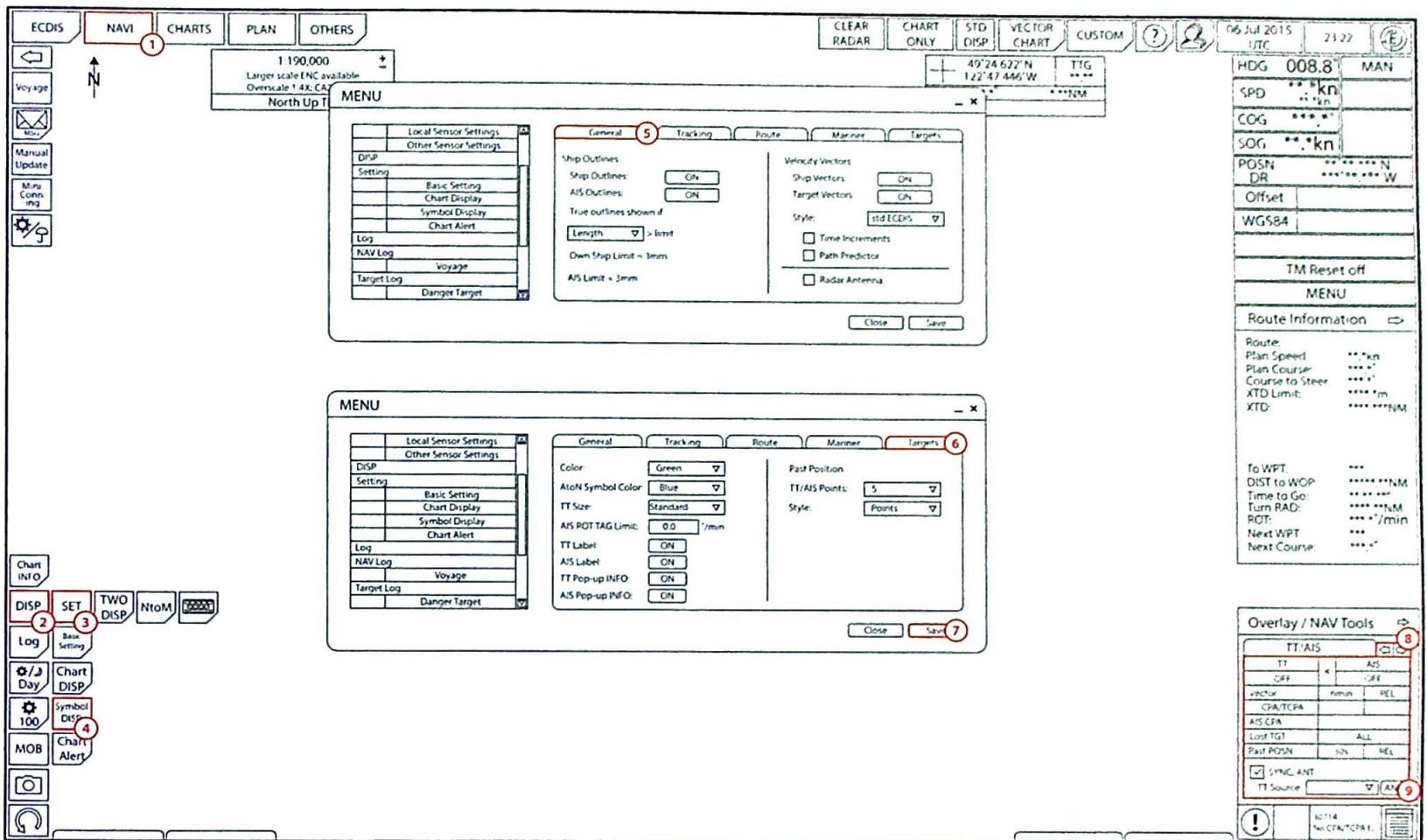


- 1 Ensure 'NAVI' is selected.
- 2 Use arrows to find the 'Look-ahead' menu.
- 3 Choose look-ahead type.
 - a Look-ahead will increase/decrease, based on vessel speed.

- b Look-ahead will be a fixed distance ahead.
- 4 Insert width for time/distance, based on look-ahead.
- 5 Insert port/starboard/bow/stern values for the permanent look-ahead box.

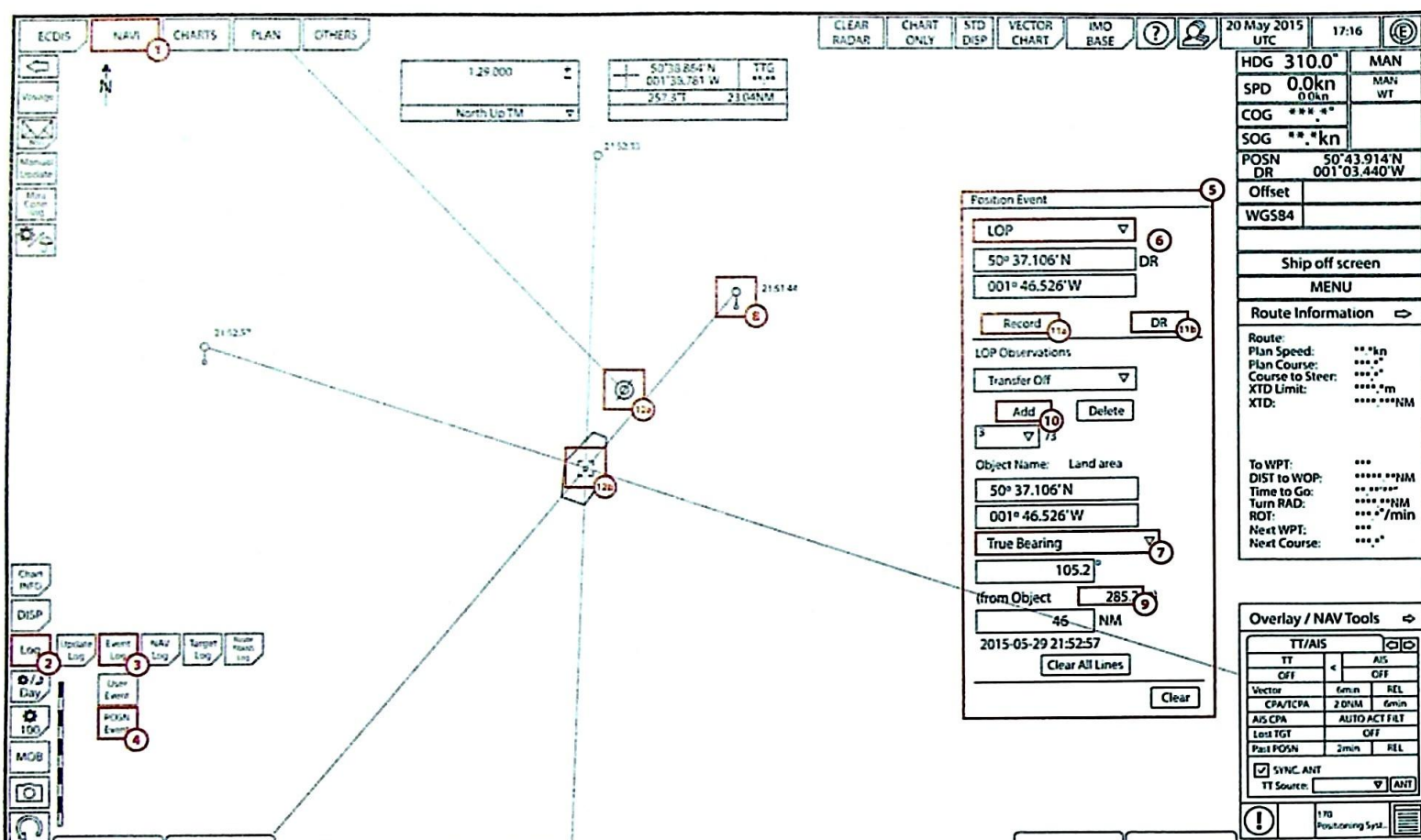
- 6 Click 'Apply' to save changes.
- 7 A look-ahead box will be drawn around your vessel.

5.2 TT/AIS/Vectors



- 1 Ensure 'NAVI' is selected.
- 2 Click 'DISP'.
- 3 Click 'SET'.
- 4 Click 'Symbol DISP'.
- 5 Select the 'General' tab and adjust settings as necessary.
- 6 Select the 'Targets' tab and adjust settings as necessary.
- 7 Click 'Save' to apply changes.
- 8 Use white arrows to find the TT/AIS menu.
- 9 Adjust settings from the 'TT/AIS' menu, as necessary.

5.3 Position Fixing



- 1 Ensure 'NAVI' is selected.
- 2 Select 'Log'.
- 3 Select 'Event Log'.
- 4 Select 'POSN Event'.
- 5 The 'Position Event' window will open.
- 6 Ensure 'LOP' is selected from the dropdown menu.
- 7 Ensure 'True Bearing' is selected from the dropdown menu.
- 8 Click on your first reference point.
- 9 Enter the bearing to your reference point.
- 10 Select 'Add' to confirm the first LOP. Repeat steps 8 to 10 three times.
- 11 Confirm your position fix.
 - a Vessel will remain in GNSS and a fix stamp will be applied to the chart.
 - b System will switch to 'DR' and the vessel will be repositioned on the chart.
- 12 Location of vessel after fix.

5.4 Logs/Playback

The screenshot displays the ECDIS interface with several key elements highlighted for the procedure:

- NAVY Menu:** Located at the top left, with 'NAVY' selected.
- Log Button:** Located in the bottom left toolbar, highlighted with a red circle 2.
- ENC Install/Update History Window:** A large window showing a list of update logs with columns for Date, Time, Source, Type, Latit, Longit, S.SRC, SOG, COG/T, and S.SRC. It includes a 'Period Covered (UTC)' filter and 'Refresh', 'Find', and 'Print Text' buttons.
- Set Date Calendar:** A calendar window showing the date 6 Jul 2015, with a red circle 3 highlighting the date selection.
- Playback Window:** A window for setting playback parameters, including 'Start' and 'End' times, and a time bar for selecting a specific time of day, highlighted with a red circle 5.
- LOG FILES - VOYAGE LOG Table:** A table showing log entries with columns: Date, Time, Source, Type, Latit, Longit, S.SRC, SOG, COG/T, S.SRC. It includes a 'Period Covered (UTC)' filter and 'Refresh', 'Find', 'Print Text', 'Export File', and 'Show Tracks' buttons.

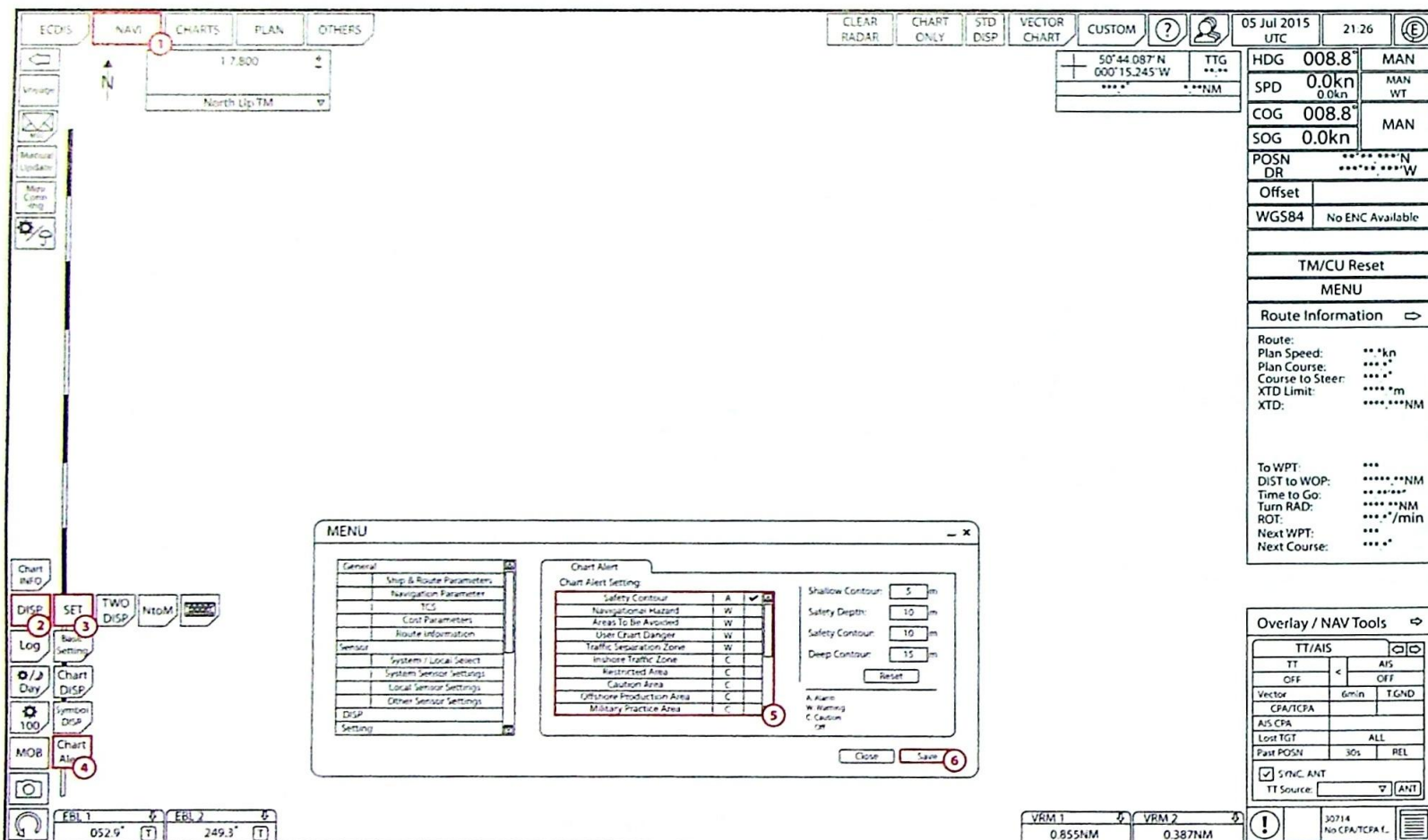
- 1 Ensure 'NAVY' is selected.
- 2 Click 'Log'.
- 3 Available logs:
 - a Update Log.
 - b NAV Log.
 - c Target Log.

- 4 Example logs:
 - a Example of ENC Update Log.
 - b Example Voyage Log.
- 1 Click 'OTHERS'.
- 2 Click 'Playback'.

- 3 Select a date from the calendar to view playback.
- 4 Click 'OK'.
- 5 Use the time bar to select a specific time of day.
- 6 Click 'Exit' when finished.

Section 6: System Settings

6.1 Warning/Alarm Configuration



- 1 Ensure 'NAVI' is selected.
- 2 Click 'DISP'.
- 3 Click 'SET'.
- 4 Click 'Chart Alert'.
- 5 Choose between alarms, cautions and warnings and use tick boxes to enable/disable.
- 6 Click 'Save' to apply changes.

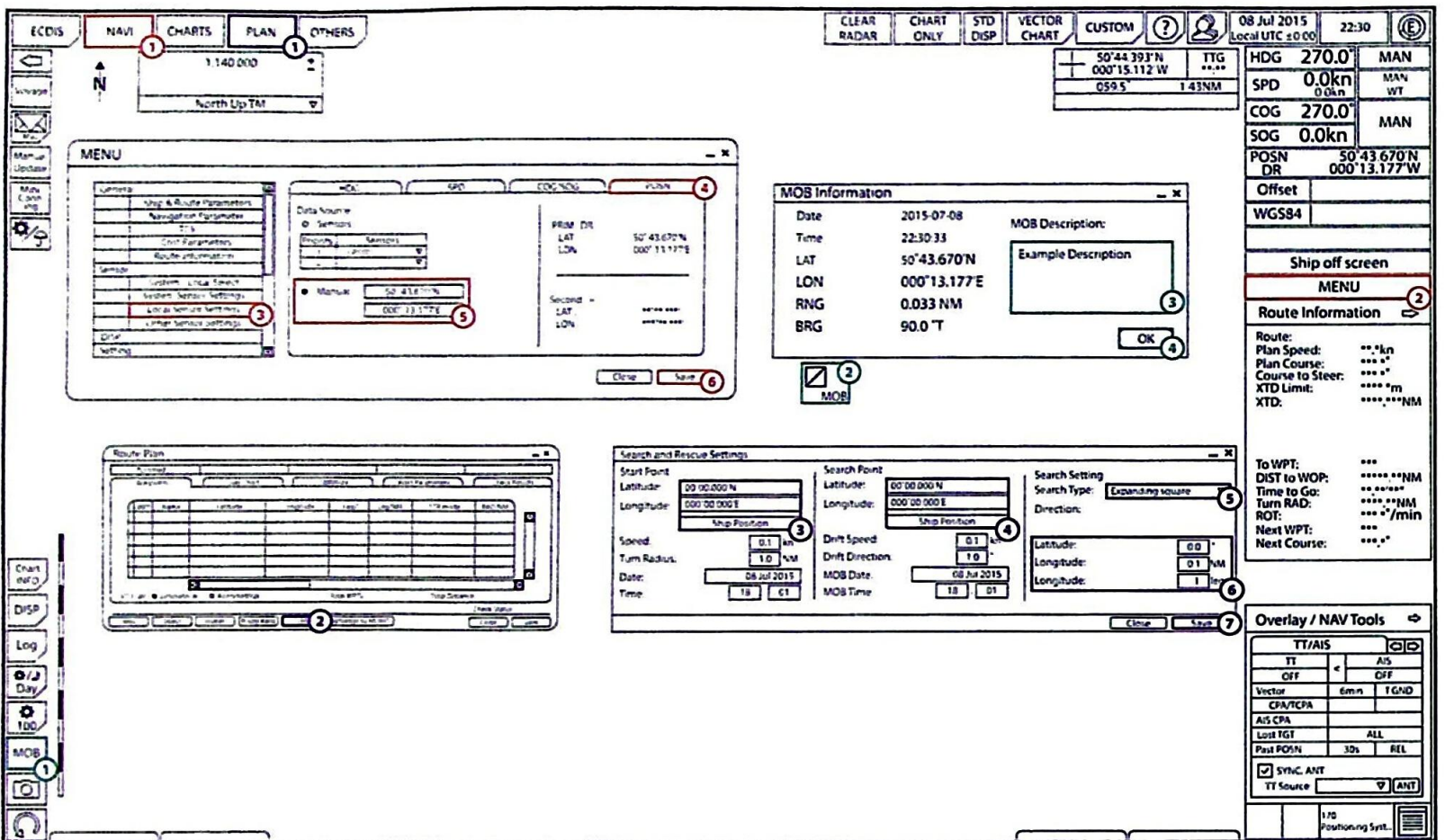
6.2 Position/Heading/Speed

The screenshot displays the ECDIS interface with the following components and callouts:

- 1**: NAVI tab selected in the top menu.
- 2**: MENU button in the top right corner.
- 3**: 'System/Local Select' option in the Sensor menu.
- 4**: 'Local Sensor' radio button selected in the Sensory Type menu.
- 5**: 'Local Sensor Settings' option in the Sensor menu.
- 6**: HDG tab selected in the heading settings window.
- 7**: SPD tab selected in the speed settings window.
- 8**: POSN tab selected in the position settings window.
- 9**: Save button in the bottom right of the HDG settings window.

- 1** Ensure 'NAVI' is selected.
- 2** Click 'MENU'.
- 3** Select 'System/Local Select'.
- 4** Tick 'Local Sensors' ('System Sensors' only use physical navigation sensor inputs).
- 5** Select 'Local Sensor Settings'.
- 6** Select 'HDG' to make changes to heading information.
- 7** Select 'SPD' to make changes to speed information.
- 8** Select 'POSN' to make changes to position information.
- 9** Click 'Save' to apply changes.

6.3 Emergency Menus

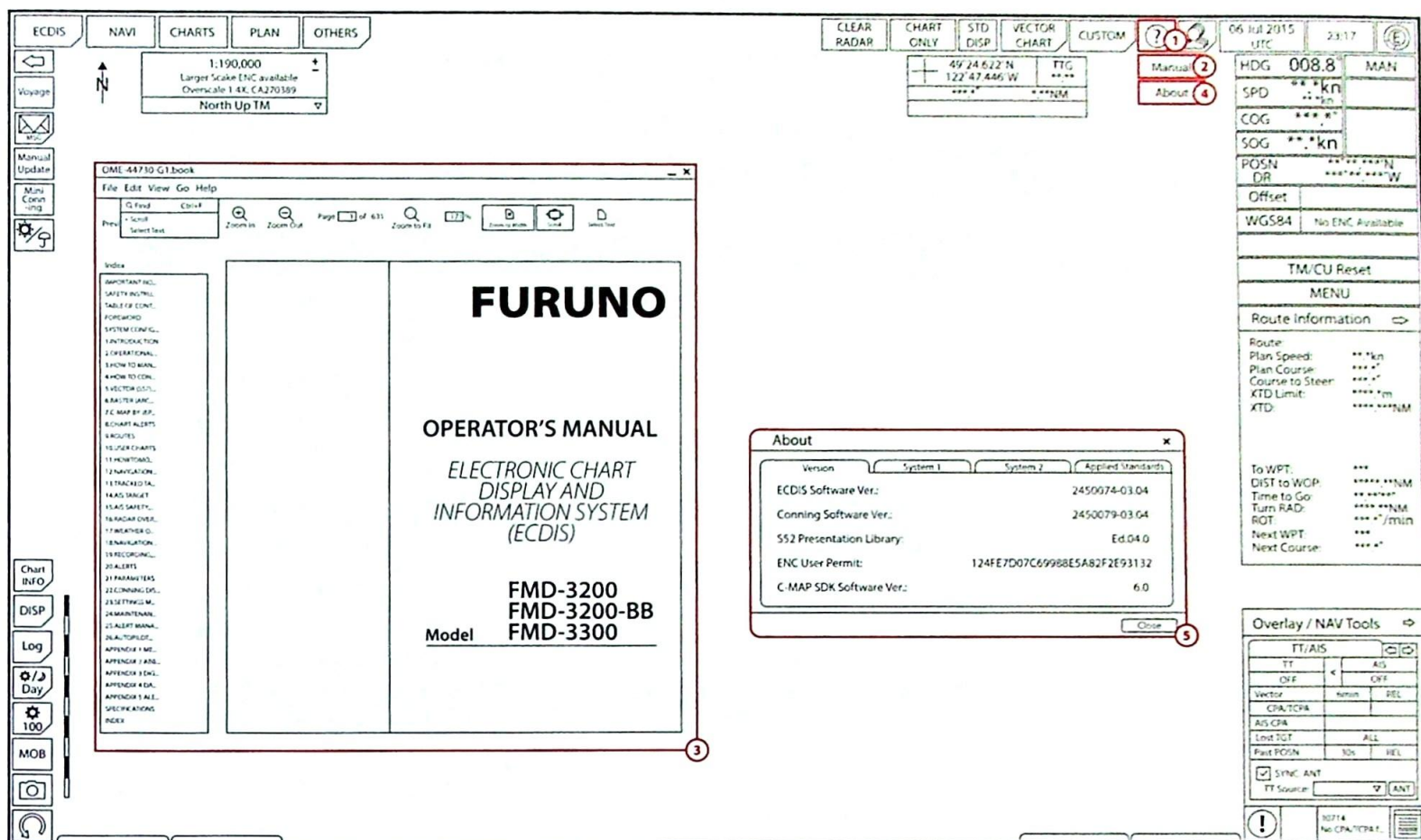


- 1 Ensure 'NAVI' mode is selected.
- 2 Click 'MENU'.
- 3 Select 'Local Sensor Settings'.
- 4 Click 'POSN'.
- 5 Enter manual position.
- 6 Click 'Save' to apply changes.

- 1 Click 'MOB'.
- 2 Left click on the MOB marker.
- 3 Fill description.
- 4 Click 'OK' when finished.
- 1 Ensure 'PLAN' mode is selected.
- 2 From the 'Route Plan' table, click 'SAR'.

- 3 Insert a 'Start Point'.
- 4 Insert a 'Search Point'.
- 5 Select 'Search Setting' from the dropdown.
- 6 Configure settings.
- 7 Click 'OK' to accept.

6.4 Manual/About



1 Click the help icon.

2 Click 'Manual' to open the manual.

3 The manual will open.

4 Click 'About'.

5 The 'About' menu will open to show software versions.

5. iXblue Gecdis-C – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures	Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display	Become familiar with the basic chart functionality from the main display.	
	Menu Bar		
	Display		
	Centre on Own Ship		Zoom x10
	Orientation		Zoom +
	Relative motion		Zoom –
	Centre on Place		Charts
	Scale		Colour Mode
	Radar Range		ECDIS Mode
	Best Scale		Minimal Mode
	Window Zoom		View
3.	Navigational Tools	Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Navigation		
	Man Over board (ON/OFF)		Piloting Fix
	Danger Detection (ON/OFF)		Geographical Calculations
	Fix Own ship	User Objects	
	Clearing Line (No More)		Open Objects List
	Clearing Line (No Less)		
4.	Chart Display Settings	Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Charts		
	Chart Display Mode		Chart Information
	Chart Objects		Danger on the Route
	Fixed Cell...		Chart Legend (Chart 1)...
	Set Viewing Dates...		Hidden Prohibited Area (highlight)...
5.	Route Planning	Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Navigation		
	Geographical Calculations		Create Route
	Create SAR diagram		Create Route with Cursor
	Create Instant Route		Edit Selected Route
	Active Alerts		
6.	Route Monitoring	Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
	Route		Tracks
	Display		
	Critical Point Alarm		
	Route monitoring		

iXblue Gecdis-C – Familiarisation Checklist (Page 2 of 2)

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Charts

Chart Provider	Objects Detection
Projection	Presentation
Safety Option ENC	Charts Catalogue

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensor Settings

--	--

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alerts

ARCS	Default
Areas	Advanced
ENCs	Safety
Display zone to watch	Use Guard Sector (ON/OFF)

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

System

Import	Settings
Print	General Configuration

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

Help

--	--

6. JRC JAN-701B/901B/2000 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures	Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display	Become familiar with the basic chart functionality from the main display.	
	Main Chart Display		
	Main Title Bar		Tools
	Own Ship Information		Brilliance
	Other Ship Information		Cursor position
	AIS Filter		TCS Bar
	Auto Sail Status	Chart	
	Route Watch		Multi View
	Route Information		S-57/C-MAP/ARCS
	Chart information		
3.	Navigational Tools	Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Tools		
	MOB		Cursor Readout
	EBL/VRM		File Manager
	LOP		
4.	Chart Display Settings	Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Chart		
	Marking/Highlighting		Date-dependent View...
	Off Center		Multi View
	User Settings		Chart Portfolio...
	Select S-57 Chart...		Chart Abbreviation...
	Fix View		Chart Setting...
	Accept S-57 Updates...		Chart Common
	Graphical Index...		Chart View
	Manual Updates		[O] Accuracy (ON/OFF)
	Display Chart Name (ON/OFF)		Chart Symbol – Scale min (ON/OFF)
5.	Route Planning	Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Route Planning		
	Table Editor		Settings
	Graphic Editor		Route Type
	Create Alternate Route		Auto Sail
	Distance Measurement		Anchor Watch
	Use XTD Alarm		User Map
	Select Route – ETA (ON/OFF)		Check Safety in Editing (ON/OFF)
6.	Route Monitoring	Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
	Display Panel		
	Own Ship Information		Route Watch
	Other Ship Information Setting		Route Information
	AIS Filter		Brilliance
	Auto Sail Status		Cursor Position

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7. **Chart Updating**
The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Main Menu

Chart	Accept S-57 Updates
Manual Update	Chart Portfolio

8. **System Sensors**
Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensor Selection/Status

Heading	Time Zone
STW	Date/Time Settings
POSN 1	Position Status
POSN 2	
Date	

9. **System Alerts**
Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alert Limit Settings

Difference between POSN1 and POSN2	Timer
Shift of POSN1	Vector
Course difference (Off Course)	Sector
Early Course Change Indication	Area
End of Track (Arrived LAST WPT)	Vector (ON/OFF)
Sector (ON/OFF)	Traffic Separation Zone

10. **System Units**
Become familiar with the system's logbook, records, data storage and configuration set up.

Main	Setting
Print	Color and Brilliance Setting
Save Screen	Option Key Setting
Logbook	Date/Time Setting
Rader Overly	Marker Setting
Make AZ	Logbook Setting
File Manager	Logbook Setting (NAVTEX Setting)
Test	Voyage Distance Clear
Sensor	Display Panel Option
Setting	Alarm Setting (Limit)
	Buzzer Setting

11. **ECDIS Operator's Manual**
Locate the system's operator's user guide for referencing and help.

Hard copy of Operator's Manual only available


JRC JAN-701B/901B/2000

Key JRC JAN-701B/901B/2000 ECDIS Menu Functions

1.	Selection of additional side panels (Docking, Voyage, Wind)	Main>Multi Window
2.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	Serviceman>Ship's Parameter...
3.	View list of installed Charts	Chart>Chart Portfolio>[S-57]/[ARCS]
4.	View the latest update number installed	Chart Portfolio>[S-57]/[ARCS] System Chart>Last Update
5.	Save Chart Settings	Chart>User Setting>Save Chart Setting...
6.	View information on charted objects and view additional text	Context Menu>S-57/C-MAP/ARCS Information>Left Click
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Chart>Setting...>S-57/C-MAP/ARCS>View Common>Depth Alarm
8.	Input a User Map Object	User Map>User Map Editor>New
9.	Input a Manual Update	Chart>Manual Update>Start
10.	Turn the ship outline on	Own Ship/Track>Setting...>Own Ship Symbol
11.	Configure the Danger Detection Area (Anti-grounding Cone)	Own Ship/Track>Setting...>Danger Detection
12.	Configure Velocity Vectors and Ship's Track	Own Ship/Track>Setting...>Vector/Track
13.	Manually change WPT information of an Active Route	Manually select WPT in the Route Display Panel
14.	View past Alarms and Warnings	Alarm List or Main>Logbook>Event Column
15.	Input a Visual or Radar Fix	Main>LOP>Create LOP...

The screenshot displays the ECDIS interface with the following components:

- Menu Title-Bar:** Located at the top left of the chart area.
- Chart Display Area:** The central area showing a nautical chart with various symbols, contours, and a route. A large white circle highlights a specific area on the chart.
- TCS Bar:** Located at the bottom right of the chart area.
- Display Panel:** A vertical panel on the right side containing various data and settings:
 - Own Ship INFO [CCRP1]:** HDG (MAN) 180.0°, STW (MAN) 10.0 Kn, COG (DR) 180.0°, SOG (DR) 10.0 Kn, LMT 2011-07-08 14:32:17+01:00.
 - Position:** POSN1 DR WGS-84 50°15.818'N 4°10.265'W.
 - Vector/Track:** Vector 6 min, Dep 1.
 - Filter:** NotRD, Ring, Factor.
 - Route:** To WPT 001, DIST 2.8 NM, BRG 359.1°.
 - CALC:** Drift, Route, WPT, Pair.
 - DEST:** 1, 2.6 NM.
 - SPD:** Actual, 10.0 Kn.
 - TTG:** 0:15:20.
 - ETA:** 07-08 14:47 LMT.
 - Chart INFO:** MOB Standard, Port List 1 600 000, Home 65 934 NM, Zoom Out Free, Zoom In North Up, Zoom Area 000.0°.
 - Tools:** EBL1 T OFF * D, VRM1 OFF NM, EBL2 T OFF * D, VRM2 OFF NM, SRB (Data) Alarm List, Over scale.
- Status Bar:** Located at the bottom of the screen, showing: To WPT 1 Next WPT 2, TTG 0:15:20, CRS 180.0, ETA 07-08 14:47, XTD S 0.44, NM, XTL P 0.10, S 0.10, 2 Alarms, 2 Warnings.

Own Ship INFO [CCRP1] 		← CCRP and Picture Freeze
HDG (MAN)	180.0 °	← Own Ship Data
STW (MAN)	10.0 Kn	
COG (DR)	180.0 °	
SOG (DR)	10.0 Kn	
LMT	2011-07-08 14:32:17+01:00	← Date and Time
POSN1	50°15.818'N	← Primary Position
DR		
WGS-84	4°10.265'W	
Vector	T 6 min	← Additional Data
Depth	(***). * m	
Association		← Contact Display
Filter	Ring Sector	
NotRDY		
Route	GC Demo	← Route Display
To WPT	001:	
DIST 2.8 NM BRG 359.1°		
CALC	Drift Route WPT Pair	
DEST	1 2.6 NM	← Route Data
SPD	Actual 10.0 Kn	
TTG	0:15:20	
ETA	07-08 14:47 LMT	
Chart INFO		
<input checked="" type="checkbox"/> MOB	Standard !	← Chart Information
Port List	1:600,000	
Home	65.934 NM	
Zoom Out	Free	
Zoom In	North Up	
Zoom Area	000.0 °	
Tools		← Tools
EBL1	T OFF ° D	
VRM1	OFF NM	
EBL2	T OFF ° D	
VRM2	OFF NM	
SRB (Data)		← Alarms and Warnings
Over scale.	Alarm List	
E T	*** * °	← Cursor Data
	***** NM	

JRC

JAN-701B/JAN-901B/JAN-2000

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Section 1: Main Display

1.1 Screen Layout

The screenshot shows the ECDIS Main Display interface. At the top, a menu bar (1) contains options: (1) AIS/TT, (2) Route, (3) AUTO Sail, (4) Ownship/Track, (5) User Map, (6) Chart, (7) Main, (8) Exit. The main display area (2) is currently blank. On the right side, there is a 'Own Ship INFO [CCRP1]' panel (1) showing various parameters: HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn, UTC 2000-01-01 12:00:00+00:00, POSN1 DR 00°00.000'N, WGS-84 000°00.000'E, CTS, Vector T 01 min, and Depth (***) m. Below this is a 'Filter' section with 'Association', 'Ring', and 'Sector' options. A 'Route' section shows 'UNLOAD' and 'AUTO Select' options, along with 'DIST' and 'BRG' fields. A 'CALC' section has tabs for 'Drift', 'Route', and 'WPT', with fields for 'DEST', 'SPD Actual', 'TTG', and 'ETA'. The 'Chart INFO' section includes checkboxes for 'MOB' (checked), 'Port List' (1:300,000), 'Home' (30.309 NM), 'Zoom Out' (True), 'Zoom In' (North Up), and 'Zoom Area' (000.0). A 'Tools' section has checkboxes for 'EBL1', 'VRM1', 'EBL2', and 'VRM2'. At the bottom, a 'TCS bar' (3) shows 'Autopilot(Data)' and 'Alarm List' with a '1 Alarms' and '1 Warnings' indicator. The bottom status bar (3) displays 'To WPT ***', 'Next WPT ***', 'TTG *****', 'CRS ***', 'ETA ****', 'XTD *****', 'NM', 'XTL P***, S***', and '1 Alarms 1 Warnings'.

1 Main title bar

3 TCS bar

2 Display panel

4 Chart display area

1.2 Colour Palette/Profiles

The screenshot shows the ECDIS software interface with the following elements and numbered callouts:

- 1**: Click 'Charts' in the main title bar.
- 2**: Click 'User Settings'.
- 3**: Click 'Save Chart Setting...'.
- 4**: Enter a chart setting name (e.g., 'Test').
- 5**: Click 'OK' to save the setting.
- 6**: Open 'Chart Setting List...'.
- 7**: Select your chart setting (e.g., 'Test').
- 8**: Click 'Load'.
- 9**: Click 'Close'.
- 10**: Find 'Brilliance' settings using left/right arrows.
- 11**: Change settings here.

- 1** Click 'Charts' in the main title bar.
- 2** Click 'User Settings'.
- 3** Click 'Save Chart Setting...'.
- 4** Enter a chart setting name.

- 5** Click 'OK' to save the setting.
- 6** Open 'Chart Setting List...'.
- 7** Select your chart setting.
- 8** Click 'Load'.

- 9** Click 'Close'.
- 10** Find 'Brilliance' settings using left/right arrows.
- 11** Change settings here.

1.3 Range/Scale/Motion

(1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (0) Exit

Scale	Manual Range	Motion
1:300,000	30.309	True
1:300,000	96 NM	Relative
1:250,000	48 NM	Free
1:150,000	24 NM	
1:125,000	12 NM	
1:100,000	6 NM	
1:75,000	3 NM	
1:60,000	1.5 NM	
1:50,000		

Own Ship INFO [CCRP1]

HDG (MAN) 000.0°
 STW (MAN) 0.0 kn
 COG (DR) 000.0°
 SOG (DR) 0.0 kn

UTC 2000-01 01 12:00:00+00:00

POSN1 00°00.000'N
 DR 000°00.000'E
 WGS-84

CTS
 Vector T 01 min
 Depth (***) m

Association
 Filter Ring Sector

Route UNLOAD
 To WPT AUTO Select
 DIST **** NM BRG ****

CALC Drift Route WPT
 DEST 0 NM
 SPD Actual kn
 TTG
 ETA UTC

Chart INFO

MOB	Standard
<input checked="" type="checkbox"/>	1:300,000 1
<input type="checkbox"/>	30.309 NM 3
<input type="checkbox"/>	True 5
<input type="checkbox"/>	North Up
<input type="checkbox"/>	Zoom Area 000.0

Brilliance
 PANEL VID TGT Day1

Autopilot(Data) Alarm List
 E T **** NM ****

To WPT *** TTG *****
 Next WPT *** CRS *****

ETA ***** XTD ***** NM XTL P ***** S *****
 1 Alarms 1 Warnings

1 Click on the scale dropdown.

2 Select a manual scale from the list.

3 Click on the range dropdown.

4 Select a manual range from the list.

5 Click the motion dropdown.

6 Select True/Relative/Free from the list.

1.4 Setting CCRP

The screenshot shows the ECDIS software interface with several windows and panels. The main menu at the top has items (1) AIS/TT, (2) Route, (3) AUTO Sail, (4) Ownship Track, (5) User Map, (6) Chart, (7) Main, and (8) Exit. The 'Main' menu is open, showing options like (1) Serviceman, (2) Cross Bearing..., (3) Create Clearing Line, (4) LOP, (5) Code Input, and (6) Setting. The 'Code Input' dialog is open, showing a text field with '0' and 'OK' and 'Cancel' buttons. The 'CCRP Setting' window is open, showing a diagram of a ship's radar beam and a table of CCRP settings. The right-hand panel shows 'Own Ship INFO [CCRP1]' with fields for HDG, STW, COG, SOG, UTC, POSN1, WGS-84, CTS, Vector, and Depth. Below this is a 'Filter' section with 'Ring' and 'Sector' options, and a 'Route' section with 'UNLOAD' and 'AUTO Select' options. The bottom status bar shows 'To WPT ***', 'TTG ****', 'ETA **', 'XTD *', 'NM', 'XTLP **', 'S **', '1 Alarms', and '1 Warnings'.

1 Click 'Main' in the menu title bar.

4 Click 'OK' to confirm code input.

7 Open 'CCRP Setting...'

2 Open 'Code Input'.

5 Click 'Serviceman'.

8 View/configure CCRP setting in this window.

3 Enter Code '0'.

6 Select 'Installation'.

Section 2: Navigation Tools

2.1 EBL/VRM/PI

Own Ship INFO (CCRP1)	
HDG (MAN)	000.0°
STW (MAN)	0.0 kn
COG (DR)	000.0°
SOG (DR)	0.0 kn
UTC 2000-01-01 12:00:00+00:00	
POSN1	00°00.000'N
DR	
WGS-84	000°00.000'E
CTS	***
Vector	T [01] min
Depth	(***) [***] m
Association	
Filter	Ring Sector
Route UNLOAD	
To WPT AUTO Select	
DIST **** NM BRG ****	
CALC Drift Route WPT	
DEST	0 - NM
SPD	Actual - kn
TTG	**** UTC
ETA	**** UTC
Chart INFO	
<input checked="" type="checkbox"/> MOB	Standard
Port List	1:30.000
Home	3.031 NM
Zoom Out	Free
Zoom In	North Up
Zoom Area	000.0
Tools	
EBL1	282.4 D 21°55'291"N
VRM1	0.729 NM 114°16'917"E
EBL2	T OFF
VRM2	OFF NM
Autopilot(Data)	
Alarm List	
E	T

1 Use the left/right arrows to show the 'Tools' menu.

2 Left click 'Off' to turn on the EBL.

3 Left click 'Off' to turn on the VRM.

4 Example VRM on the chart.

5 Example EBL on the chart.

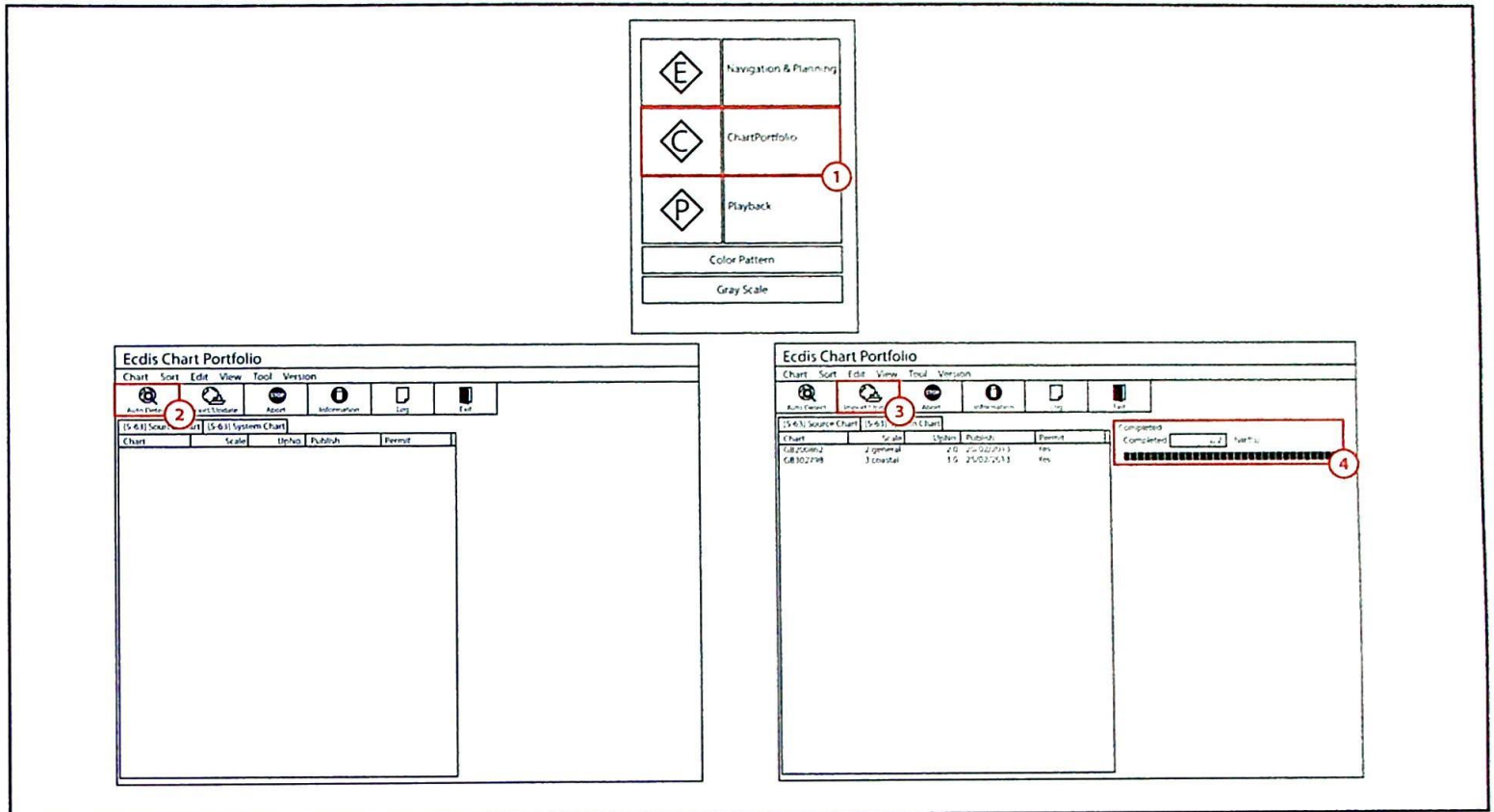
6 Left click on the little empty box.

7 Left click on the chart to offset the EBL/VRM.

2.2 Manual Corrections

- 1 Click 'Chart' on the main title bar.
- 2 Open 'Manual Update'.
- 3 Click 'Start'.
- 4 Left click on the main chart panel to select a chart, then click 'OK'.
- 5 Select an object from the list.
- 6 Left click on the location to place your object.
- 7 Select 'Property'.
- 8 Left click on the object.
- 9 Verify position.
- 10 Verify viewing scale.
- 11 Enter a comment.
- 12 Click 'OK'.
- 13 Click 'Save'.
- 14 Click 'OK'.

2.3 Chart Updates



Note to user: Ensure your update media is inserted and that permits and base CD are installed.

1 Open 'Chart Portfolio' from the start-up screen.

2 Click 'Auto Detect'.

3 Click 'Import/Update'.

4 Completed.

2.4 No Go Areas/User Charts

The screenshot shows the ECDIS software interface. The main workspace contains a circle (labeled 5) and a polygon (labeled 6). A 'Save as' dialog box is open, showing a table with columns for 'File Name' and 'Comment'. The 'Name' field is set to 'User Map' (labeled 8) and the 'Save' button is highlighted (labeled 9). The right-hand panel displays 'Own Ship INFO (CCRP1)' with various parameters like HDG, STW, COG, SOG, and UTC. Below this, there are sections for 'Filter', 'Route', 'CALC', 'Chart INFO', and 'Tools'.

- 1 Click 'User Map'.
- 2 Open 'User Map Editor'.
- 3 Select object type.
- 4 Select object shape from the list.
- 5 Example circle object.
- 6 Example area object.
- 7 Click 'Save'.
- 8 Name your user map.
- 9 Click 'Save'.
- 10 Click 'Select User Map..' to open your map in navigation mode.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour

The screenshot shows the ECDIS interface with the 'Chart Settings' dialog box open. The 'Depth Alarm' section contains the following settings:

- Shallow Contour: 12 (Step 4)
- Safety Contour: 5 (Step 5)
- Safety Depth: 13 (Step 6)
- Deep Contour: 30 (Step 7)

The 'Chart' menu is open, showing the following options:

- (1) Mark Highlighting
- (2) Off Center
- (3) User Settings
- (4) Select S-57 Chart...
- (5) Fix View
- (6) Accept S-57 Updates...
- (7) Graphical Index...
- (8) Manual Update
- (9) Date-dependent View...
 - (1) Multi View
 - (2) Chart Portfolio...
 - (3) Chart Abbreviation...
- (0) Setting... (Step 2)
- (1) S-57/C-MAP/ARCS (Step 3)
- (2) Other Chart

The 'Apply' button in the 'Chart Settings' dialog is highlighted with a red circle and labeled as Step 8.

- 1 Click 'Chart'.
- 4 Edit 'Shallow Contour'.
- 7 Edit 'Deep Contour'.
- 2 Click 'Setting...'
- 5 Edit 'Safety Contour'.
- 8 Click 'Apply' to save changes.
- 3 Open 'S-57/C-MAP/ARCS'.
- 6 Edit 'Safety Depth'.

3.2 Display Preference Options

(1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (8) Exit

(1) Main Highlighting
(2) Off Center
(3) User Settings

(4) Select S-57 Chart...
(5) Fix View
(6) Accept S-57 Updates...
(7) Graphical Index...

(8) Manual Update

(9) Date-dependent View...
(1) Multi View
(2) Chart Portfolio...
(3) Chart Abbreviation...

(10) Setting... (1) S-57/C-MAP/ARCS (2) Other Chart

Chart Settings

View Common View1 View2

Display Category
 Base
 Standard
 Other

Area Boundary
 Plane
 Symbolized

Depth Alarm
 Shallow Contour 12 m
 Safety Contour 5 m
 Safety Depth 13 m
 Deep Contour 30 m
 Two Color Depth
 Shallow Pattern
 Show Isolated Danger In Shallow Water

Chart Symbol
 Paper Chart
 Simplified
 Full Light Line
 Consider Scale Minimum

C-MAP Ed.3 Database

Chart Graphics Performance
 Fast
 Hi Quality

OK Cancel Apply

Own Ship INFO [CCRP1]

HDG (MAN) 000.0 °
 STW (MAN) 0.0 kn
 COG (DR) 000.0 °
 SOG (DR) 0.0 kn

UTC 2000-01-01 12:00:00+00:00

POSN1 00°00.000'N
 DR 000°00.000'E
 WGS-84

CTS
 Vector T 01 min
 Depth (***) m

Association

Filter Ring Sector

Route UNLOAD
 To WPT AUTO Select

DIST ****. NM BRG ****.

CALC Drift Route WPT

DEST 0 NM
 SPD Actual ****. kn
 TTG
 ETA ****. UTC

Chart INFO

MOB Standard !

Port List 1.300.000

Home 30.309 NM

Zoom Out True

Zoom In North Up

Zoom Area 000.0

Tools

EBL1	T	OFF	*
VRM1		OFF	NM
EBL2	T	OFF	*
VRM2		OFF	NM

Autopilot(Data) Alarm List

To WPT *** TTG ****.*** ETA **.*.*** XTD *.*.*.*** NM XTL P *.*.*** S *.*.***

Next WPT *** CRS *.*.*** 1 Alarms 1 Warnings

1 Click 'Chart'.

2 Click 'Setting...'

3 Open 'S-57/C-MAP/ARCS'.

4 Configure 'Area Boundary' settings.

5 Configure 'Chart Symbol' settings.

6 Enable/disable 'Two Color Depth'.

7 Enable/disable 'Shallow Pattern'.

8 Enable/disable 'Show Isolated Danger In Shallow Water'.

9 Click 'Apply' to save changes.

3.3 Display Configuration

- 1 Click 'Chart'.
- 2 Click 'Setting...'
- 3 Open 'S-57/C-MAP/ARCS'.
- 4 Click 'View1'.
- 5 Select 'S-57(S-63)'.
- 6 Enable/disable layers, as required.
- 7 Enable/disable text layers, as required.
- 8 Click 'Apply' to save changes.

3.4 Abbreviations Part 1

The screenshot shows the ECDIS interface with the following elements:

- Menu Bar:** (1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (8) Exit
- Own Ship INFO:**
 - HDC (2) (MAN) (3) 000.0°
 - STW (4) (MAN) (3) 0.0k (5)
 - COG (6) (DR) (7)
 - LOG (8) (DR) (7) 0.0 kn
 - UTC (9) 2000-01-01 12:00:00+00:00
 - POSN (10) 00°00.0 (11) N
 - DR (10) 000°00.0 (13) E
 - WGS-84 (12)
 - CTS (14)
 - Vect. T 01 min
 - Depth (***) m
- Chart INFO:**
 - MOB Standard
 - Port List 1:300,000
 - Home 30.309 NM
 - Zoom Out True
 - Zoom In North Up
 - Zoom Area 000.0°
- Tools:**
 - EBL1 T OFF NM
 - VRM1 OFF NM
 - EBL2 T OFF NM
 - VRM2 OFF NM
- Bottom Panel:**
 - To WPT *** TTG ***** ETA **.* XTD *.* NM XTL P *.* S ***
 - Next WPT *** CRS *** 1 Alarms 1 Warnings

- | | | |
|--|--------------------------------------|--------------------------|
| 1 Continuous Common Reference Point | 8 Speed Over Ground | 15 Waypoint |
| 2 Heading | 9 Universal Time Coordinated | 16 Distance |
| 3 Manual | 10 Position | 17 Nautical Miles |
| 4 Speed Through Water | 11 North | 18 Bearing |
| 5 Knots | 12 World Geodetic System 1984 | 19 Destination |
| 6 Course Over Ground | 13 East | 20 Speed |
| 7 Dead Reckoning | 14 Course to Steer | |

3.4 Abbreviations Part 2

(1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (8) Exit						Own Ship INFO [CCRP1]	
						HDG (MAN)	000.0 °
						STW (MAN)	0.0 kn
						COG (DR)	000.0 °
						SOG (DR)	0.0 kn
						UTC	2000-01-01 12:00:00+00:00
						POSN1	00°00.000'N
						DR	000°00.000'E
						WGS-84	
						CTS	****
						Vector	T **** 01 min
						Depth	(***) **** m
						Association	
						Filter	Ring Sector
						Route	UNLOAD
						To WPT	AUTO Select
						DIST **** NM	BRG ****
						CALC Drift Route WPT	
						DEST	0 **** NM
						SPD	Actual **** kn
						TTG (21)	****
						ETA (22)	**** UTC (23)
						Chart INFO	
						<input checked="" type="checkbox"/> MOP	Standard
						Port List (24)	1:300.000
						Home	30.309 NM
						Zoom Out	True
						Zoom In	North Up
						Zoom Area	000.0
						Tools	
						EBL (25)	T OFF
						VRM (26)	OFF NM
						EBL	T OFF
						VRM2	OFF NM
						Autopilot(Data) Alarm List	
						E	**** NM
To WPT ***	(27) TTG ****	ETA ****	(28) XTD ****	NM	(29) XTL P *** S ***		
Next WPT ***	CRS ****				1 Alarms	1 Warnings	

- (21) Time to Go
- (24) Man Overboard
- (27) Course
- (22) Estimated Time of Arrival
- (25) Electronic Bearing Line
- (28) Cross Track Distance
- (23) Universal Time Coordinated
- (26) Variable Range Marker
- (29) Cross Track Limit

Section 4: Route Planning

4.1 Creation

The screenshot shows the ECDIS Route Planning interface. The main chart area displays a route with several waypoints. Red circles and numbers 1 through 10 indicate the sequence of actions for creating a route. The right-hand panel contains various settings and data, including Own Ship INFO, Chart INFO, and Tools.

Own Ship INFO [CCRP1]	
HDG (MAN)	000.0°
STW (MAN)	0.0 kn
COG (DR)	000.0°
SOG (DR)	0.0 kn
UTC	2000-01-01 12:00:00+00:00
POSN1	00°00.000'N
DR	000°00.000'E
WGS-84	
CTS	
Vector	T 01 min
Depth	(***) m
Association	
Filter	Ring Sector
Route	UNLOAD
To WPT	AUTO Select
DIST	****. NM
BRG	****. °
CALC	
Drift	Route WPT
DEST	0 ****. NM
SPD	Actual ****. kn
TTG	****. min
ETA	****. UTC
Chart INFO	
<input checked="" type="checkbox"/> MOB	Standard
Port List	1.30.000
Home	3.031 NM
Zoom Out	Free
Zoom In	North Up
Zoom Area	000.0
Tools	
EBL1	T OFF °
VRM1	OFF NM
EBL2	T OFF ° D
VRM2	OFF NM
Alarm List	
Timer	Alarm List
E	T ****. min
	****. NM

- 1 Click 'Route'.
- 2 Click 'Route Planning'.
- 3 Open 'Graphic Editor'.
- 4 Click 'New'.
- 5 Left click to place first waypoint.
- 6 Consecutive left clicks will place more waypoints.
- 7 Click 'Save'.
- 8 Name your route.
- 9 Comment on your route.
- 10 Click 'OK' to finish.

4.2 Schedule/Route Checking

Route Name: Comment: Type:

Route Check:

Close New Open... Save Insert Delete Divide Default View SYNC Total

WPT No.	Position		XTL		ARR RAD	SPD [kn]	Sail RL/GC	ROT [°/min]	Turn RAD	Time Zone	CRS [°]	DIST [NM]	ETA [DATE HH:MM]
	LAT	LON	PORT	STBD									
0	21°55.452'N	114°16.871'E								+00:00			15-08-16 07:13
1	21°54.842'N	114°15.168'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	248.9	1.7	15-08-16 08:03
2	21°55.708'N	114°13.365'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	297.4	3.6	15-08-16 09:00
3	21°55.110'N	114°12.650'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	228.0	4.5	15-08-16 09:27
4	21°53.688'N	114°13.753'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	114.3	6.2	15-08-16 10:19
5	21°53.582'N	114°15.748'E	0.10	0.10	0.50	15.0	GC	028.7	0.50	+00:00	093.3	8.1	15-08-16 10:27
6	21°54.330'N	114°17.159'E	0.10	0.10	0.50	15.0	GC	028.7	0.50	+00:00	060.3	9.6	15-08-16 10:27
7													

Own Ship INFO [CCRP1]

HDG (MAN) 000.0°

STW (MAN) 0.0 kn

LOG (DR) 000.0°

SOG (DR) 0.0 kn

UTC 2000-01-01 12:00:00+00:00

POSN1 00°00.000'N

DR 000°00.000'E

WGS-84

CTS

Vector T 01 min

Depth (***) m

Association

Filter Ring Sector

Route UNLOAD

To WPT AUTO Select

DIST **** NM BRG ****°

CALC Drift Route WPT

DEST 0 NM

SPD Actual kn

TTG

ETA

Chart INFO

MOB Standard

Port List 1 300,000

Home 30,309 NM

Zoom Out True

Zoom In North Up

Zoom Area 000.0

Tools

EBL1 T OFF

VRM1 OFF NM

EBL2 T OFF D

VRM2 OFF NM

Timer Alarm

Position shift. List

E T

Safe Check Result

All Legs		27 Error(s)	
WPT	Cause	Position	Result
0->1	Safety contour	21°58.153'N 114°08.253'E	Error
0->1	Safety contour	21°58.333'N 114°07.965'E	Error
0->1	Safety contour	21°58.170'N 114°07.873'E	Error
0->1	Safety contour	21°57.625'N 114°07.424'E	Error
0->1	Safety contour	21°58.167'N 114°07.757'E	Error
0->1	Safety contour	21°58.101'N 114°07.530'E	Error
0->1	Safety contour	21°57.897'N 114°07.546'E	Error
0->1	Safety contour	21°57.952'N 114°07.563'E	Error
0->1	Safety contour	21°58.404'N 114°08.460'E	Error
0->1	Safety contour	21°58.417'N 114°08.297'E	Error
0->1	Safety contour	21°57.777'N 114°07.439'E	Error
0->1	Safety contour	21°57.897'N 114°07.546'E	Error
0->1	Safety contour	21°58.167'N 114°07.757'E	Error
0->1	Safety contour	21°58.404'N 114°08.460'E	Error
0->1	Safety contour	21°58.952'N 114°07.583'E	Error
0->1	Safety contour	21°58.417'N 114°08.297'E	Error
0->1	Safety contour	21°58.101'N 114°07.530'E	Error

Jump Reset Disregard

OK Cancel

To WPT *** TTG ***** CRS ****

Next WPT *** ETA **.*.*.* XTD *.*.*.* NM XTL P *.*.* S *.*.*

2 Alarms 1 Warnings

Note to user: Speed has priority over ETA in the route editor table. For example, if the ETA for the last waypoint has changed, the ETA for previous waypoints will change to meet the new arrival time. If the speed for all legs is changed by 1 knot, the overall ETA will be sooner.

- 1 Continue from Section 4.1 and then click 'Table Editor'.
- 2 Ensure 'Total' is selected from the dropdown.
- 3 Adjust speeds in the 'SPD' column, as necessary.
- 4 Adjust the 'ETA' column, as necessary.
- 5 Click 'Safety Check'.
- 6 The 'Safe Check Result' list will open if hazards are found.
- 7 Click 'OK' to finish.

4.3 Optimisation

Route Name: Comment: Type:

Route Check:

WPT No	Position		XTL		ARR RAD	SPD	Sail	ROT	Turn RAD	Time Zone	CRS	DIST	ETA
	LAT	LOX	PORT	STBD		[kn]	RL/GC	[°/min]			[°]	[NM]	[DATE HHMM]
0	21°55.452'N	114°16.871'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00			15-08-16 07:13
1	21°54.842'N	114°15.168'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	248.9	1.7	15-08-16 08:03
2	21°55.708'N	114°13.365'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	297.4	3.6	15-08-16 09:00
3	21°55.110'N	114°12.650'E	0.10	0.10	0.50	2.0	GC	003.8	0.50	+00:00	228.0	4.5	15-08-16 09:27
4	21°53.696'N	114°13.753'E	0.10	0.10	0.50	2.0	GC	007.8	0.50	+00:00	114.3	6.2	15-08-16 10:19
5	21°51.562'N	114°15.758'E	0.10	0.10	0.50	15.0	GC	028.7	0.50	+00:00	093.3	8.1	15-08-16 10:27
6	21°54.330'N	114°17.000'E	0.10	0.10	0.50	15.0	GC	028.7	0.50	+00:00	060.3	9.6	15-08-16 10:33
7													

Own Ship INFO (CCRP1)

HDG (MAN) 000.0°

STW (MAN) 0.0 kn

COG (DR) 000.0°

SOG (DR) 0.0 kn

UTC 2000-01-01 12:00:00+00:00

POSN1 00°00.000'N

DR 000°00.000'E

WGS-84

CTS Vector T 01 min

Depth (**) m

Association

Filter Ring Sector

Route UNLOAD

To WPT AUTO Select

DIST ****.NM BRG ****.

CALC Drift Route WPT

DEST 0 NM

SPD Actual kn

TTG

ETA

Chart INFO

MOB Standard

Port List 1:300,000

Home 30.309 NM

Zoom Out Free

Zoom In North Up

Zoom Area 000.0

Tools

EBL1 T OFF °

VRM1 OFF NM

EBL2 T OFF ° D

VRM2 OFF NM

Timer Alarm

Position shift. List

E T ****.NM

To WPT ***

Next WPT ***

TTG ****.***

CRS ****.

ETA **.***.***

XTD *****

NM

2 Alarms

XTL P **. S **.

1 Warnings

Note to user: Continue from the last step in Section 4.2.

- 1 Verify waypoint positions.
- 2 Configure PORT/STBD cross track limit.
- 3 Configure arrival circle radius.
- 4 Set each leg to Rhumb Line/Great Circle.
- 5 Configure Rate of Turn for each waypoint.
- 6 Configure turn radius for each waypoint.
- 7 Click 'Save' to save changes.

4.4 Selecting Active Route

The screenshot displays the ECDIS interface with a route selection panel on the right and a chart on the left. The route selection panel includes the following sections:

- Own Ship INFO (CCRP1):** HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn.
- UTC:** 2000-01-01 12:00:00+00:00
- POSN1:** DR 00°00.000'N, WGS-84 000°00.000'E
- CTS:** Vector T, Depth (***)
- Association:** Filter Ring Sector
- Route:** Route W (highlighted with callout 1)
- To WPT:** 001: -
- DIST:** NM, BRG: °
- CALC:** Drift, Route, WPT. Fields for DEST (0 NM), SPD (Actual kn), TTG, and ETA (UTC) are shown (callout 3).
- Chart INFO:** MOB Standard, Port List 1:50,000, Home 50.052 NM, Zoom Out Free, Zoom in North Up, Zoom Area 000.0°.
- Tools:** EBL1, VRM1, EBL2, VRM2 (all OFF, NM).
- Off Course:** Position shift, Alarm List.

The chart on the left shows a route with waypoints and obstacles, highlighted with callout 2. The bottom status bar displays: To WPT, Next WPT, TTG, CRS, ETA, XTD, NM, 4 Alarms, and 1 Warnings.

1 Select your route from the dropdown.

2 The route will load onto your chart.

3 Use navigation tools to gather route information.

Section 5: Route Monitoring

5.1 Look-Ahead

The screenshot shows the ECDIS interface with two dialog boxes open. The 'Own Ship Setting' dialog (left) includes fields for 'Ship's Name' (OCEANPRINCEG), 'Own Ship Symbol' (Outline), and checkboxes for 'Display Heading and Beam line', 'Display Ground-referenced Velocity', 'Display Water-referenced Velocity', and 'Display Vector Time Mark'. The 'Alarm Limit Setting' dialog (center) includes checkboxes for 'Track', 'Difference between POSN1 and POSN2' (0.500 NM), 'Shift of POSN1' (0.100 NM), 'Off Course' (015.0), 'Arrival Last WPT' (3.0 min), 'Timer' (Alarm occurs at 00:00 LMT), 'Vector' (Length 12.0 min, Width 200.0 m, Radius 5.0 min, Width 060.0), and 'Area'. A look-ahead sector is shown on the right side of the main display area, with a callout 8 pointing to it. The right side of the interface shows 'Own Ship INFO (CCRP1)' with parameters like HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn, and UTC 2000-01-01 12:00:00+00:00. Below this is a 'Filter' section with 'Association', 'Ring', and 'Sector' options. The 'Route' is set to 'UNLOAD' and 'To WPT' is 'AUTO Select'. The 'CALC' section shows 'Drift' and 'Route' options. The 'Chart INFO' section shows 'MOB' (Standard), 'Port List' (1-25,000), 'Home' (2.526 NM), 'Zoom Out' (Free), 'Zoom In' (North Up), and 'Zoom Area' (000.0). The 'Tools' section shows 'EBL1', 'VRM1', 'EBL2', and 'VRM2' options. The 'Autopilot(Data)' section shows 'Alarm List' and 'Autopilot(Data)' options. The bottom status bar shows '1 Alarms' and '1 Warnings'.

1 Click 'Ownship/Track'.

2 Open 'Setting...'.

3 Click 'Set Alarm Limit'.

4 Adjust settings here to modify look-ahead.

5 Click 'OK'.

6 Click 'Apply'.

7 Click 'OK' to finish.

8 Example look-ahead sector.

5.2 TT/AIS/Vectors

The screenshot shows the ECDIS software interface with the following components:

- Menu Bar:** (1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (8) Exit
- Left Panel:**
 - (3) AIS (4) All
 - (5) Deactivate All AIS
 - (6) All List (7) Select List
 - (8) Target Track (9) Own Ship's AIS Data (1) Message
 - (0) AIS Sentence (0) AIS/TT Setting... (2)
- Ownship/Track Window (4):**
 - (1) Adjust (2) Anchor Watch (0) Setting... (5)
- AIS/Tracking Target Setting Window (3):**
 - Display TT Vector
 - Display Activated AIS Heading Line
 - AIS/TT Past Position: INM
 - Target Number: []
 - AIS: ON
 - TT: ON
 - Target Number: []
 - Ring: 15.0 NM
 - Sector: 120.0
 - Filter Mode: Priority
 - Filter Display
 - CPA/TCPA Limit: CPA 1.0 NM, TCPA 20 min
 - AIS Lost Alarm: OFF
 - AIS CPA/TCPA Alarm: ACT & Sleep
- Own Ship Setting Window (6):**
 - Ship's Name: OCEANPRINCE0
 - Own Ship Symbol: Outline
 - Display Heading and Beam line
 - Vector:
 - Display Ground-referenced Velocity
 - Display Water-referenced Velocity
 - Vector Time: 12 min
 - Display Vector Time Mark: 6 min
 - Track:
 - Display Past Track
 - Color: []
 - Track Period: 1 Hour
 - Past POSN: OFF
 - Display Time Label
 - Interval: 10 min
 - Danger Detection:
 - Display Vector Area
 - Display Sector Area
 - Set Alarm Limit
- Right Panel (Own Ship INFO [CCRP1]):**
 - HDG (MAN) 000.0°
 - STW (MAN) 0.0 kn
 - COG (DR) 000.0°
 - SOG (DR) 0.0 kn
 - UTC 2000-01-01 12:00:00+00:00
 - POSN1 00°00.000'N
 - DR
 - WGS-84 000°00.000'E
 - CTS
 - Vector T [] min
 - Depth (***) [] m
 - Association
 - Filter Ring Sector
 - Route UNLOAD
 - To WPT AUTO Select
 - DIST ***** NM BRG *****
 - CALC Drift Route WPT
 - DEST 0 ***** NM
 - SPD Actual ***** kn
 - TTG *****
 - ETA ***** UTC
 - Chart INFO
 - MOB Standard
 - Port List 1:25.000
 - Home 2.526 NM
 - Zoom Out True
 - Zoom in North Up
 - Zoom Area 000.0
 - Tools
 - EBL1 T OFF
 - VRM1 OFF NM
 - EBL2 T OFF D
 - VRM2 OFF NM
 - Position shift. Alarm List
 - E T ***** NM *****
- Status Bar:**
 - To WPT *** TTG ***** ETA ***** XTD ***** NM XTL P ** S **
 - Next WPT *** CRS *** 1 Alarms 1 Warnings

- 1 Click 'AIS/TT'.
- 2 Open 'AIS/TT Setting...'
- 3 Configure settings within the 'AIS/Tracking Target Setting' window, as necessary.

- 4 Click 'Ownship/Track'.
- 5 Open 'Setting...'
- 6 Adjust Ownship vector, as necessary.

5.3 Position Fixing

The screenshot shows the ECDIS interface with the following elements:

- Main Menu:** (1) Main, (2) LOP, (3) Create LOP..., (13) Delete All LOP.
- Create LOP Dialog:** Latitude: 21°57.672'N, Longitude: 114°21.147'N, Type: Bearing (005.5), Range: 3.1 NM, Time: 2015-08-15 09:40:20. Buttons: Set LOP, Select Cross Points, Create TPL, Close.
- Select Cross Point Dialog:** LOP is over 3 lines. Please Select LOP for Fix. Buttons: OK, Close.
- Select Cross Point Table:**

Latitude	Longitude
21°58.900'N	114°17.704'E
21°58.862'N	114°17.700'E
21°58.887'N	114°17.683'E
21°58.833'N	114°17.696'E
- Own Ship INFO (CCRPT):** HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn, UTC 2000-01-01 12:00:00+00:00, POSN1 DR 00°00.000'N, WGS-84 000°00.000'E, CTS Vector T 01 min, Depth (***) m.
- Chart INFO:** MOB Standard, Port List 1:25,000, Home 2.526 NM, Zoom Out True, Zoom In North Up, Zoom Area 000.0.
- Tools:** EBL1 T OFF, VRM1 OFF NM, EBL2 T OFF D, VRM2 OFF NM.
- Status Bar:** To WPT, Next WPT, TTTG, CRS, ETA, XTD, NM, XTL P, S, 1 Alarms, 1 Warnings.

- 1 Click 'Main'.
- 2 Click 'LOP'.
- 3 Open 'Create LOP...'
- 4 The 'Create LOP' window will open.
- 5 Left click the location of your first reference point.
- 6 Enter the actual bearing to the object using visual/radar.

- 7 Click 'Set LOP'.
- 8 Once at least two LOPs (maximum 3) have been set, click 'Select Cross Point'.
- 9 Click 'OK'.
- 10 The 'Select Cross Point' window will open.

- 11 Left click the LOP to select it. (Do this with all lines you would like to use for the fix.)
- 12 Click 'Reference Point' to accept the fix.
- 13 Click 'Delete All LOP' to clear the LOPs.

5.4 Logs/Playback Part 1

(1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (1) Exit

(2) Cross Clearing...
 (3) Create Clearing Line
 (4) LOP
 (6) Save Screen
 (7) Logbook (2)
 (8) Multi Window
 (1) Make AZ...
 (2) File Manager
 (3) Test
 (4) Sensor...
 (5) Code Input
 (0) Setting

No	Date	Time	Event	POSN1	POSN2	Latitude	Longitude	COG(°)	SOG(kn)
2443	2015-08-15	08:37:18(00:00+)	Off Course	DR	(none)	21°55.143'N	114°17.580'E	000.0	0.0
2444	2015-08-15	08:37:18(00:00+)	XTD	DR	(none)	21°55.134'N	114°17.580'E	000.0	0.0
2445	2015-08-15	08:40:00(00:00+)	Time	DR	(none)	21°55.134'N	114°17.580'E	000.0	0.0
2446	2015-08-15	08:50:00(00:00+)	Time	DR	(none)	21°55.134'N	114°17.580'E	000.0	0.0
2447	2015-08-15	09:00:00(00:00+)	Time	DR	(none)	21°55.134'N	114°17.580'E	000.0	0.0
2448	2015-08-15	09:10:00(00:00+)	Time	DR	(none)	21°56.054'N	114°17.580'E	000.0	10.0
2449	2015-08-15	09:20:00(00:00+)	Time	DR	(none)	21°57.720'N	114°17.580'E	000.0	10.0
2450	2015-08-15	09:30:00(00:00+)	Time	DR	(none)	21°58.831'N	114°17.580'E	000.0	0.0
2451	2015-08-15	09:40:00(00:00+)	Time	DR	(none)	21°58.831'N	114°17.580'E	000.0	0.0
2452	2015-08-15	09:45:51(00:00+)	Offset	DR	(none)	21°58.831'N	114°17.580'E	000.0	0.0
2453	2015-08-15	09:50:00(00:00+)	Time	DR	(none)	21°58.887'N	114°17.683'E	000.0	0.0
2454	2015-08-15	10:00:00(00:00+)	Time	DR	(none)	21°58.973'N	114°17.683'E	000.0	0.0
2455	2015-08-15	10:10:00(00:00+)	Time	DR	(none)	21°58.973'N	114°17.683'E	000.0	0.0

Latest 10 Day(s) Filter View Navtex View REF point Export Jump Input Close

Column Setting Delete Navtex

To WPT *** TTG ***** Next WPT *** CRS *** ETA ***** XTD ***** NM XTL P * * * S * * * 1 Alarms 1 Warnings

Own Ship INFO (CCPP1)
 HDG (MAN) 000.0°
 STW (MAN) 0.0 kn
 COG (DR) 000.0°
 SOG (DR) 0.0 kn
 UTC 2000-01-01 12:00:00+00:00
 POSN1 DR 00°00.000'N
 WGS-84 000°00.000'E
 CTS Vector T 01 min
 Depth (***) m
 Association
 Filter Ring Sector
 Route UNLOAD
 To WPT AUTO Select
 DIST ***** NM BRG *****
 CALC Drift Route WPT
 DEST 0 ***** NM
 SPD Actual ***** kn
 TTG *****
 ETA ***** UTC
 Chart INFO
 MOB Standard
 Port List 1.25.000
 Home 2.526 NM
 Zoom Out True
 Zoom In North Up
 Zoom Area 000.0
 Tools
 EBL1 T OFF
 VRM1 OFF NM
 EBL2 T OFF D
 VRM2 OFF NM
 Alarm List
 Position shift.
 E T ***** NM

1 Click 'Main'.

2 Click 'Logbook'.

3 The 'Logbook' window will open for review.

5.4 Logs/Playback Part 2

(1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship Track (5) User Map (6) Chart (7) Main (8) Exit

Own Ship INFO [STOP]

HDG (MAN) 000.0°
 STW (MAN) 0.0 kn
 COG (DR) 000.0°
 SOG (DR) 0.0 kn

UTC 2000-01-01 12:00:00+00:00

PQSN1 00°00.000'N
 DR 000°00.000'E
 WGS-84

CTS
 Vector T 01 min
 Depth (***) m

Association

Filter Ring Sector

Route UNLOAD
 To WPT AUTO Select

DIST ***** NM BRG *****

CALC Drift Route WPT

DEST 0 ***** NM
 SPD Actual ***** kn
 TTG *****
 ETA ***** UTC

Chart INFO

MOB Standard !

Port List 1:25,000
 Home 2.526 NM
 Zoom Out True
 Zoom In North Up
 Zoom Area 000.0

Tools

EBL1 T OFF *
 VRM1 OFF NM
 EBL2 T OFF *
 VRM2 OFF NM

Position shift. Alarm List

To WPT *** TTG ***** ETA ***** XTD ***** NM XTL P ** S **
 Next WPT *** CRS ***** 0 Alarms 1 Warnings

1 Click 'Playback' in the start-up menu.

3 Click 'OK' to confirm.

2 Set starting date/time.

4 Use the playback panel to control playback speed.

Section 6: System Settings

6.1 Warning/Alarm Configuration

The screenshot displays the ECDIS system settings interface. At the top, a menu bar includes options: (1) AIS/TT, (2) Route, (3) AUTO Sail, (4) Ownship/Track, (5) User Map, (6) Chart, (7) Main, and (8) Exit. The 'Main' menu is open, showing options such as (2) Cross Bearing..., (3) Create Clearing Line, (4) LOP, (6) Save Screen, (7) Logbook, (8) Multi Window, (1) Make AZ..., (2) File Manager, (3) Test, (4) Sensor..., (5) Code Input, and (0) Setting... (circled 2). A sub-menu for 'Setting...' is also visible, containing options like (1) Color and Brilliance Setting..., (2) Option Key Setting..., (3) Date/Time Setting..., (4) Marker Setting..., (5) Logbook Setting..., (6) Voyage Distance Clear, (7) Display Panel Setting..., (8) Alarm Setting... (circled 3), and (0) Buzzer Volume... (circled 4).

The 'Alarm Limit Setting' dialog box is open, showing two sections: 'Track' and 'Area'. The 'Track' section includes checkboxes for 'Difference between POSN1 and POSN2' (0.500 NM), 'Shift of POSN1' (0.100 NM), 'Off Course' (015.0'), 'Arrival Last WPT' (3.0 min), 'Timer' (Alarm occurs at 00:00 (LMT)), 'Vector' (Length 12.0 min, Width 200.0 m), and 'Sector' (Radius 5.0 min, Width 060.0'). The 'Area' section includes checkboxes for 'Traffic separation zone', 'Traffic crossing', 'Traffic roundabout', 'Traffic precautionary', 'Two way traffic', 'Deeper water route', and 'Recommended traffic lane'. The dialog has 'OK' (circled 6) and 'Cancel' buttons.

At the bottom of the interface, there are status bars for 'To WPT ***', 'TTG *****', 'ETA *****', 'XTD *****', 'NM', 'XTL P *** S ***', 'Next WPT ***', 'CRS ***', '1 Alarms', and '2 Warnings'. On the right side, there is a 'Own Ship INFO' panel with fields for HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn, UTC 2000-01-01 12:00:00+00:00, POSN1 00°00.000'N, DR, WGS-84 000°00.000'E, CTS, Vector, and Depth. Below this is a 'Filter' section with 'Association', 'Ring', and 'Sector' options. The 'Route' section shows 'Route UNLOAD', 'To WPT AUTO Select', 'DIST ***** NM', and 'BRG *****'. The 'CALC' section includes 'Drift', 'Route', and 'WPT' with fields for DEST, SPD, TTG, and ETA. The 'Chart INFO' section has checkboxes for 'MOB' and 'Standard', and fields for 'Port List', 'Home', 'Zoom Out', 'Zoom In', and 'Zoom Area'. The 'Tools' section includes 'EBL1', 'VRM1', 'EBL2', and 'VRM2' with 'T', 'OFF', and 'NM' options. At the bottom right, there is an 'Alarm List' section with 'No ENC available' and 'Alarm List' buttons.

1 Click 'Main'.

2 Click 'Setting...'

3 Open 'Alarm Setting...'

4 Configure alarm limits, as necessary.

5 Configure 'Area' alarms, as necessary.

6 Click 'OK' to save changes.

6.2 Position/Heading/Speed

The screenshot shows the ECDIS software interface with several windows and panels. Red circles and arrows indicate the sequence of steps for configuring sensors and updating position. The interface includes a main menu, an 'Enter Position' dialog, a 'Sensor Connection' dialog, and a right-hand panel with 'Own Ship INFO' and 'Chart INFO'.

Own Ship INFO (CCRP1)

HDG (MAN)	000.0°
STW (MAN)	0.0 kn
COG (DR)	000.0°
SOG (DR)	0.0 kn
UTC	2000-01-01 12:00:00+00:00
POSN1	00°00.000'N
DR	
WGS-84	000°00.000'E
CTS	***'
Vector	T ***' 01 min
Depth	(***) ***' m

Chart INFO

<input checked="" type="checkbox"/>	MOB	Standard	!
Port List		1:25,000	
Home		2.526 NM	
Zoom Out		True	
Zoom In		North Up	
Zoom Area		000.0°	

- 1 Click 'Main.'
- 2 Open 'Sensor...'
- 3 Heading sensor settings.
- 4 Speed sensor settings.
- 5 Position sensor settings.
- 6 Secondary position sensor settings.
- 7 Click 'Ownship/Track'.
- 8 Click 'Adjust'.
- 9 Click 'Enter Position...'
- 10 Enter position.
- 11 Click 'OK' to update position.

6.3 DR Position

The screenshot shows the ECDIS interface with the following elements:

- Menu Bar:** (1) AIS/TT (2) Route (3) AUTO Sail (4) Ownship/Track (5) User Map (6) Chart (7) Main (0) Exit
- Sub-menu:** (1) Adjust (2) Anchor Watch (0) Setting... (3) Enter Position... (4) Clear Offset
- Enter Position Dialog:** LAT: 53°09.892'N, LON: 32°11.285'W, OK (5), Cancel
- Marker Dialog:** POSN: 53°09.569'N, 32°11.285'W, BRG: 000.0°, RNG: 0.000 NM, Time: 0:00:43 (7)
- Chart Area:** A cursor (8) is shown on the chart.
- Right Panel:** Own Ship INFO (CCRP1), HDG (MAN) 000.0°, STW (MAN) 0.0 kn, COG (DR) 000.0°, SOG (DR) 0.0 kn, UTC 2000-01-01 12:00:00+00:00, POSN1 00°00.000'N, DR 000°00.000'E, WGS-84, CTS, Vector, Depth, Association, Filter, Ring, Sector, Route UNLOAD, To WPT AUTO Select, DIST, BRG, CALC, DEST, SPD, TTG, ETA, Chart INFO, MOB (6) standard, Port List 1:25,000, Home 2.526 NM, Zoom Out Free, Zoom In North Up, Zoom Area 000.0, Tools, EBL1, VRM1, EBL2, VRM2, Position shift, Alarm List, E, T, NM, 1 Alarms, 2 Warnings

- 1 Click 'Ownship/Track'.
- 2 Click 'Adjust'.
- 3 Click 'Enter Position...'

- 4 Enter position.
- 5 Click 'OK' to update position.
- 6 Click 'MOB'.

- 7 Marker position window will open.
- 8 Marker placed on chart.

6.4 System Information

The screenshot displays the ECDIS interface with the following components:

- Main Menu:** (1) AIS TT, (2) Route, (3) AUTO Sail, (4) Ownship Track, (5) User Map, (6) Chart, (7) Main, (8) Exit. The 'Main' menu is expanded, showing options like (1) Alarm Log, (2) System Information, and (3) Operating Time.
- System Information Dialog:** A dialog box with the following fields:

Type	xxx
Process Manager	xxx
ECDIS App	xxx
Chartportfolio	xxx
Keyboard	xxx
MaintenanceNo.	xxx
- Own Ship INFO [CCRP1]:**

HDG (MAN)	000.0 °
STW (MAN)	0.0 kn
COG (DR)	000.0 °
SOG (DR)	0.0 kn
UTC	2000-01-01 12:00:00+00:00
POSN1	00°00.000'N
DR	
WGS-84	000°00.000'E
CTS	01 min
Vector	
Depth	
- Chart INFO:**

Port List	1:25,000
Home	2.526 NM
Zoom Out	True
Zoom In	North Up
Zoom Area	000.0
- Bottom Status Bar:**

To WPT ***	TTG *****	ETA **..**	XTD *****	NM	XTL P *.*.*. S *.*.*
Next WPT ***	CRS *.*.*			1 Alarms	2 Warnings

- 1 Click 'Main'.
- 2 Click 'Test'.
- 3 Select 'System Information'.

- 4 Review information from the 'System Information' window.

7. JRC JAN-7201/9201 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures	Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display	Become familiar with the basic chart functionality from the main display.	
		Main Chart Display	View
		Chart Information Area	Multi View Mode
		Sub Information Area	View Options
		Alert Notification area	Chart Common
		Right Toolbar	Chart View
		Own Ship Information	AIO
		INFO Monitoring	
		Left Toolbar	
3.	Navigational Tools	Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
		Tools	
		MOB	Manual Position Fix
		EBL/VRM readout	Node Fixed EBL/VRM
		PI Menu	Cursor Readout
		EBL Manoeuvre Setting	File Manager
4.	Chart Display Settings	Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
		Charts	
		Manual Update	Chart Boundary
		My Port List	Chart Abbreviation
		Chart Projections	ENC Update Status Report
		Select S-57 Chart	View
		Off Center	Chart Common
		Accept S-57 Updates	Chart View
		Date-dependent View	AIS AIO Objects (ON/OFF)
			Scale min (ON/OFF)
			[A] Accuracy (ON/OFF)
5.	Route Planning	Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
		Route Planning	
		New	Anchor Watch
		Route Monitoring	User Map
		Auto Sail	Show Route Check 'Check Route' dialog box
		Setting 'Settings' dialog box	
6.	Route Monitoring	Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
		Route Monitoring	
		Route	Voyage Information
		To WPT	Voyage Calculation
		File Operations dialog button	Pair of data

JRC JAN-7201/9201 – Familiarisation Checklist (Page 2 of 2)

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Menu

Code Input	Time Zone
Chart Maintenance	

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensor Selection/Status	Position Status
-------------------------	-----------------

POSN (Main)	
POSN (Sub)	
Heading	
STW	
COG/SOG	
Time	
Depth	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alert

Collision Avoidance	Track Control
New Target Alarm	Position
Depth/Safety Contour	AMS
Vector/Sector	Timer
Use Vector (ON/OFF)	Safety Contour
Area Warning	
Traffic separation zone (ON/OFF)	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Settings	Maintenance
----------	-------------

Echo	Date/Time/Time Zone
TT/AIS Common	System Information
AIS	Software H/W Key
Sector Filter (ON/OFF)	Operating Time
Target Track	Voyage Distance
Route	Diagnostics
Autosail	Software Update
Chart	DVD Drive Cleaning
Chart Redraw	
Logbook	
NAVTEX	
Nav Equipment	
General	
Day/Night – Day 1/Day 2/Day 3/Dusk/Night	

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

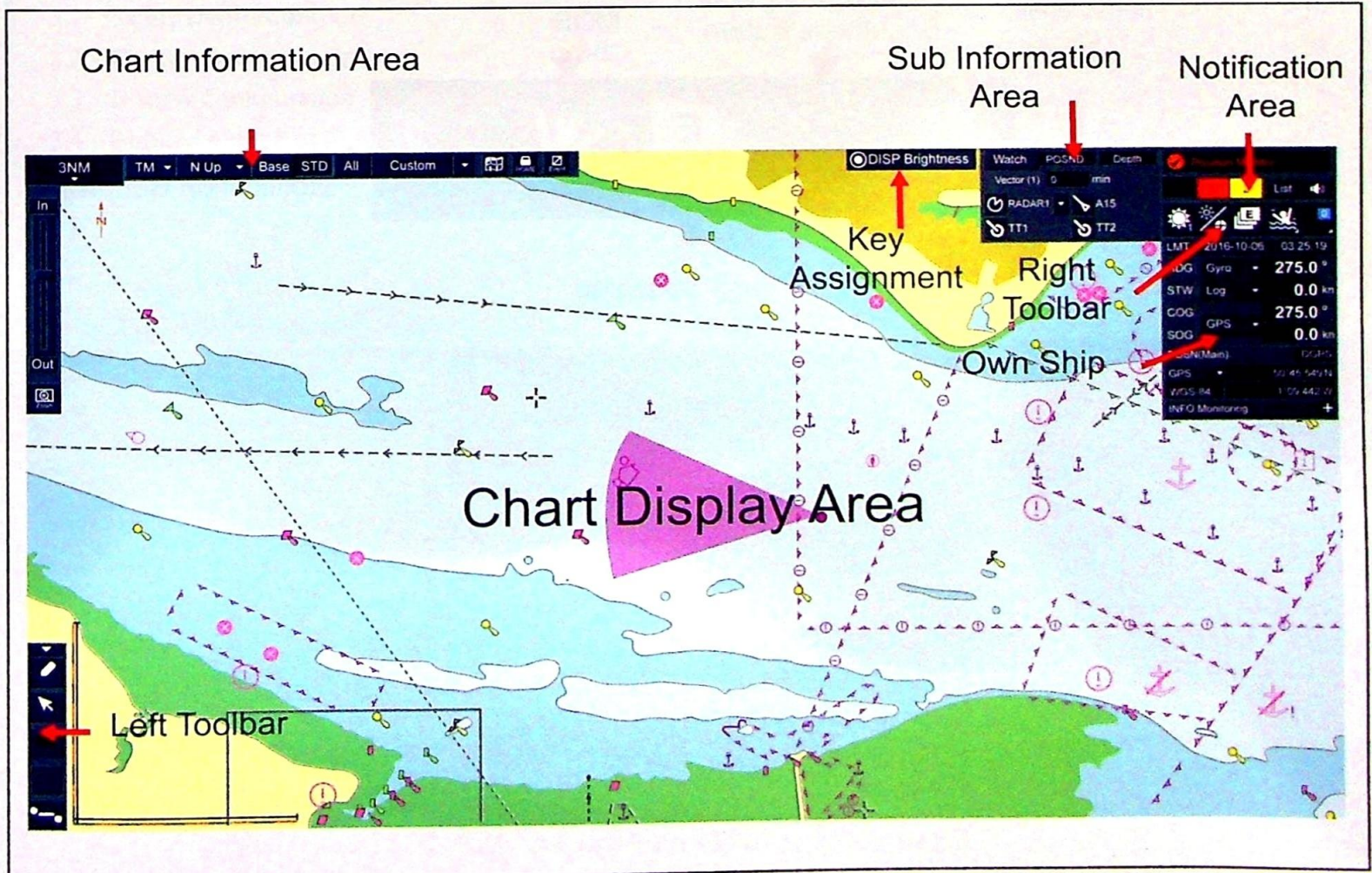
Help

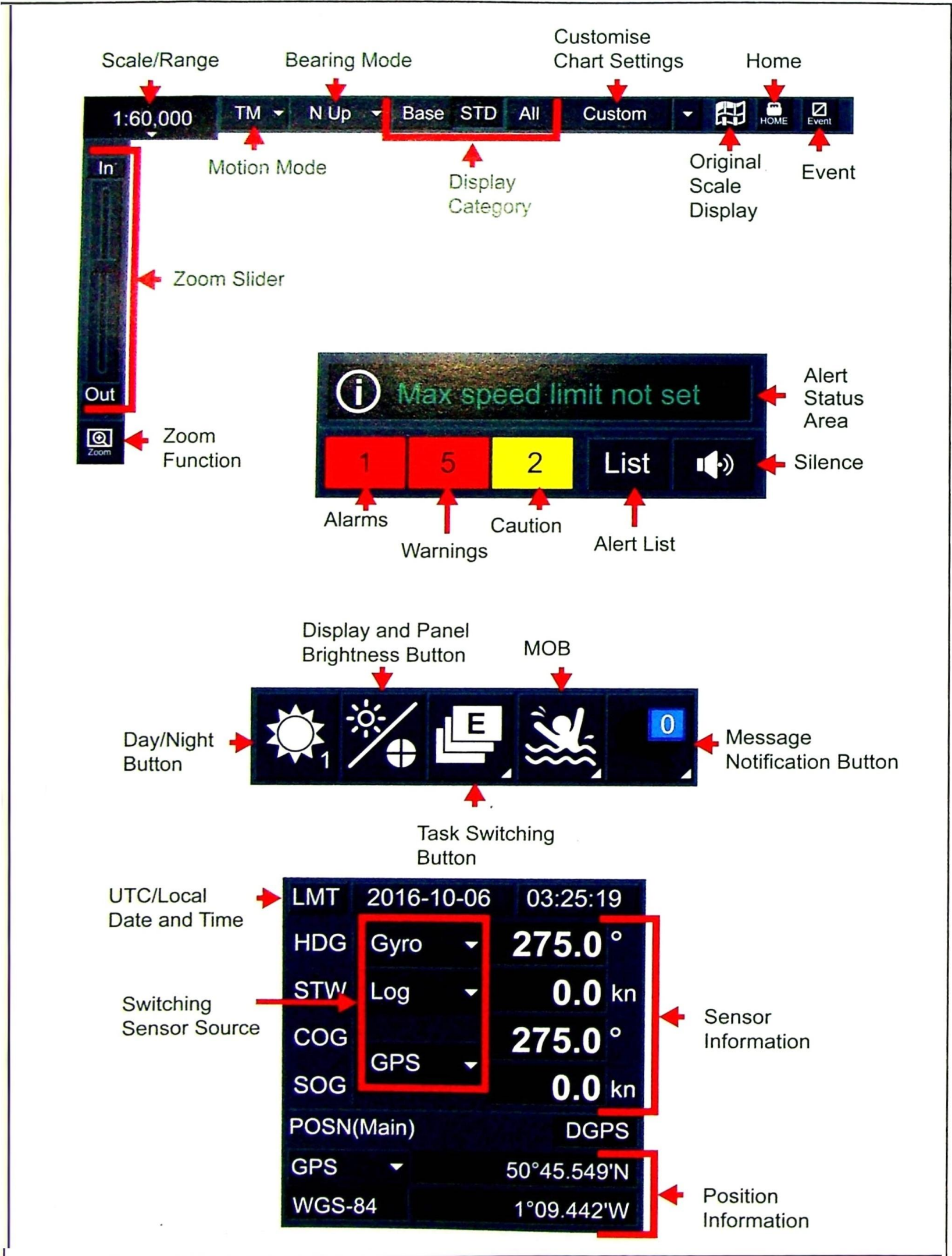
Home	Search tab
Contents tab	

JRC JAN-7201/9201

Key JRC JAN-7201/9201 ECDIS Menu Functions

1.	Configuration of Units	Menu>View>Options>Unit
2.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	Menu>Service>Installation>Ship's Parameters
3.	View list of installed Charts	Chart>Chart Portfolio>[S-57]/[ARCS]
4.	Sensor Selection/Status	Menu>Maintenance>Sensor selection/Status
5.	Save Chart Settings	Menu>Settings>Preferences
6.	View information on charted objects and view additional text	Context Menu>Readout chat Information>Left Click
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Menu>View>Options>Chart Common>Page 2
8.	Input a User Map Object	Left Toolbar>U.Map
9.	Input a Manual Update	Menu>Chart>Manual update
10.	Turn the ship outline on	Menu>View>Options>Own ship
11.	Configure the Danger Detection Area (Anti-grounding Cone)	Menu>Alert>Vector/Sector
12.	Configure Velocity Vectors	Menu>View>Options>Own ship
13.	Configure Ship's Track	Menu>View>Options>Own Track
14.	View past Alarms and Warnings	Notification Area>List>Alert History
15.	Input a Visual or Radar Fix	Menu>Tools>Manual Position Fix

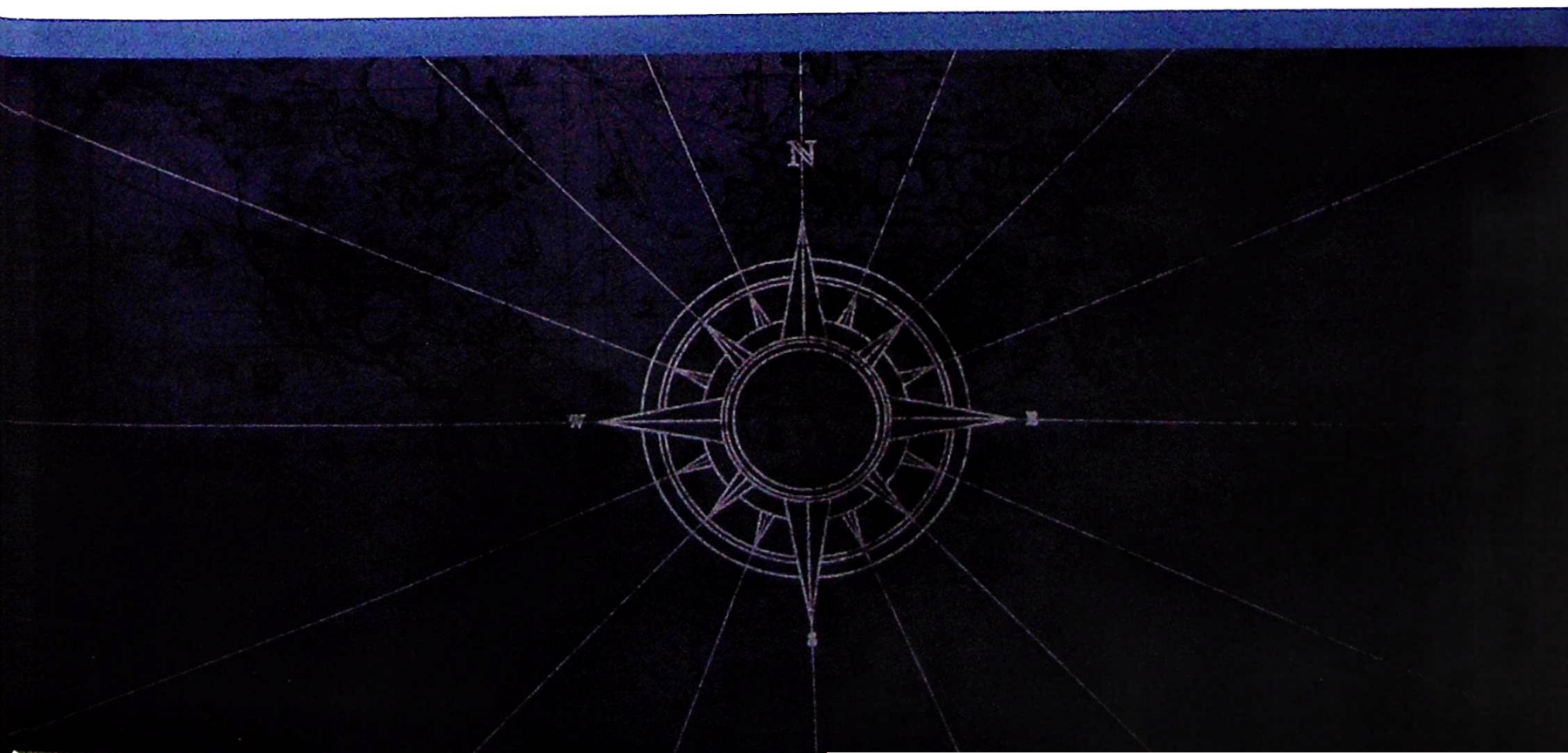




JRC

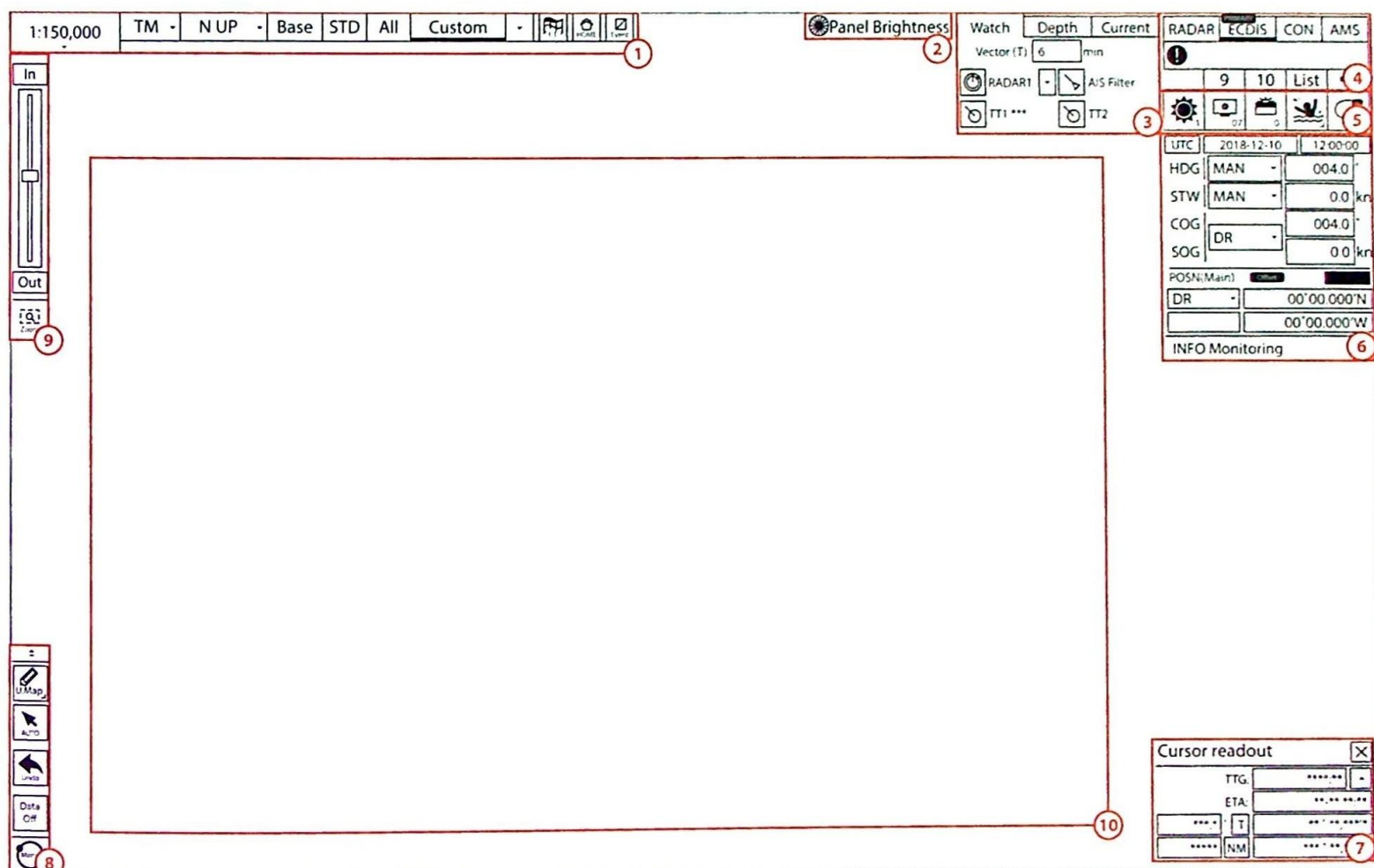
JAN-7201/JAN-9201

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Section 1: Main Display

1.1 Screen Layout

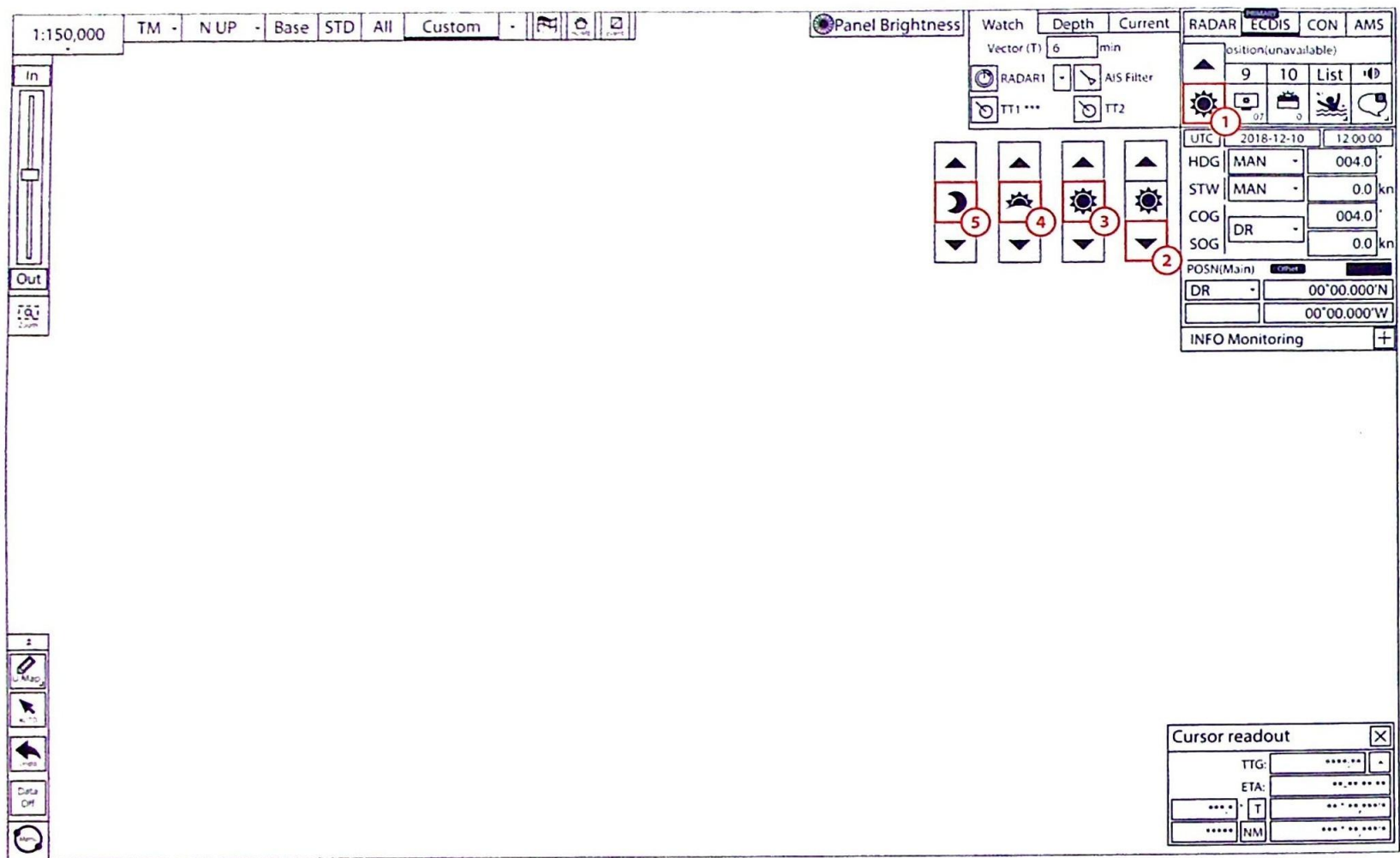


- 1 Chart information area
- 2 Key assignment
- 3 Sub information area
- 4 Notification area

- 5 Right toolbar
- 6 Own ship
- 7 'Cursor readout' box
- 8 Left toolbar

- 9 Zoom bar
- 10 Chart display area

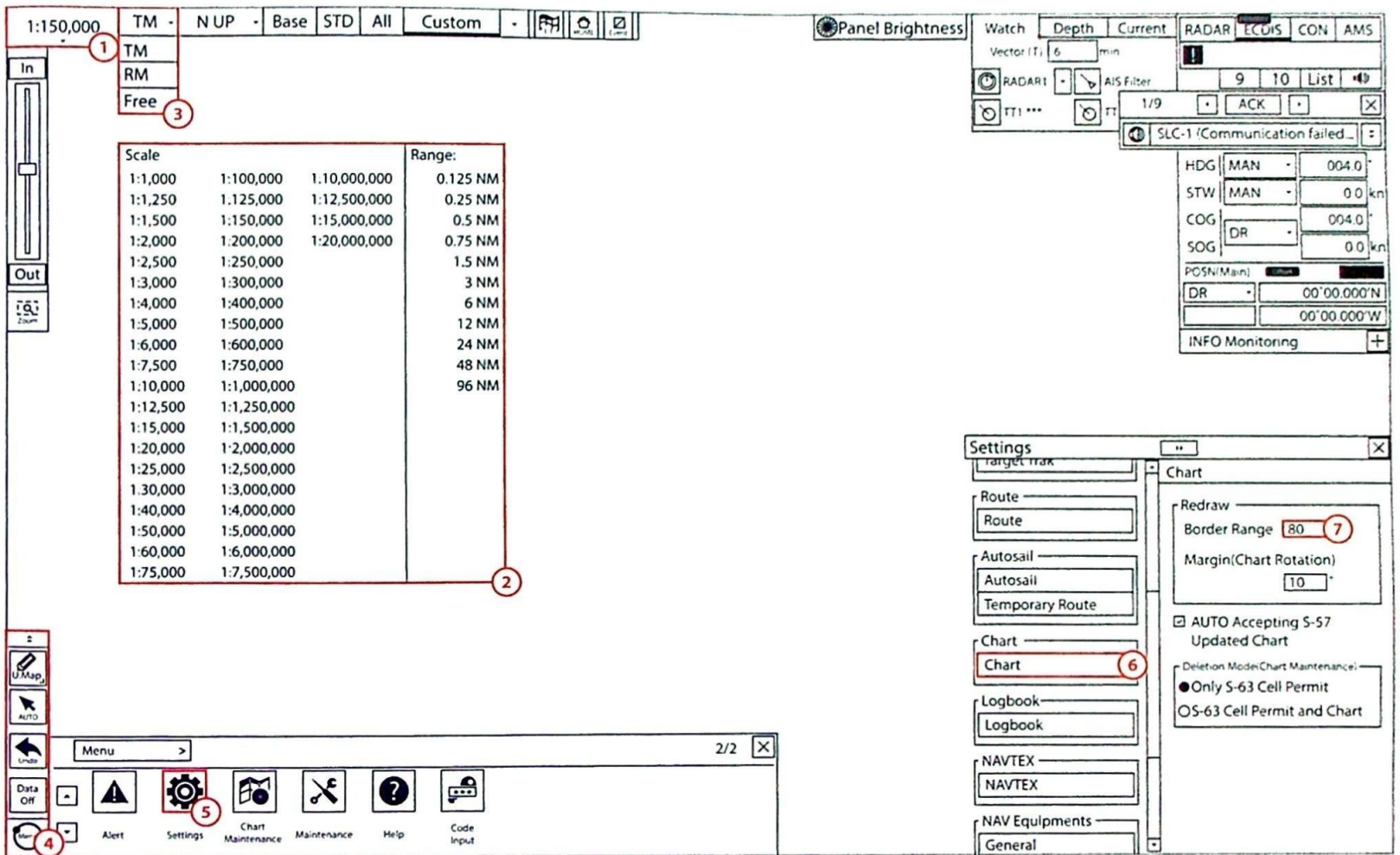
1.2 Colour Palette



- 1 Click the icon that looks like a sun.
- 2 Click the down arrow to change colour palette.

- 3 Day palette.
- 4 Dusk palette.
- 5 Night palette.

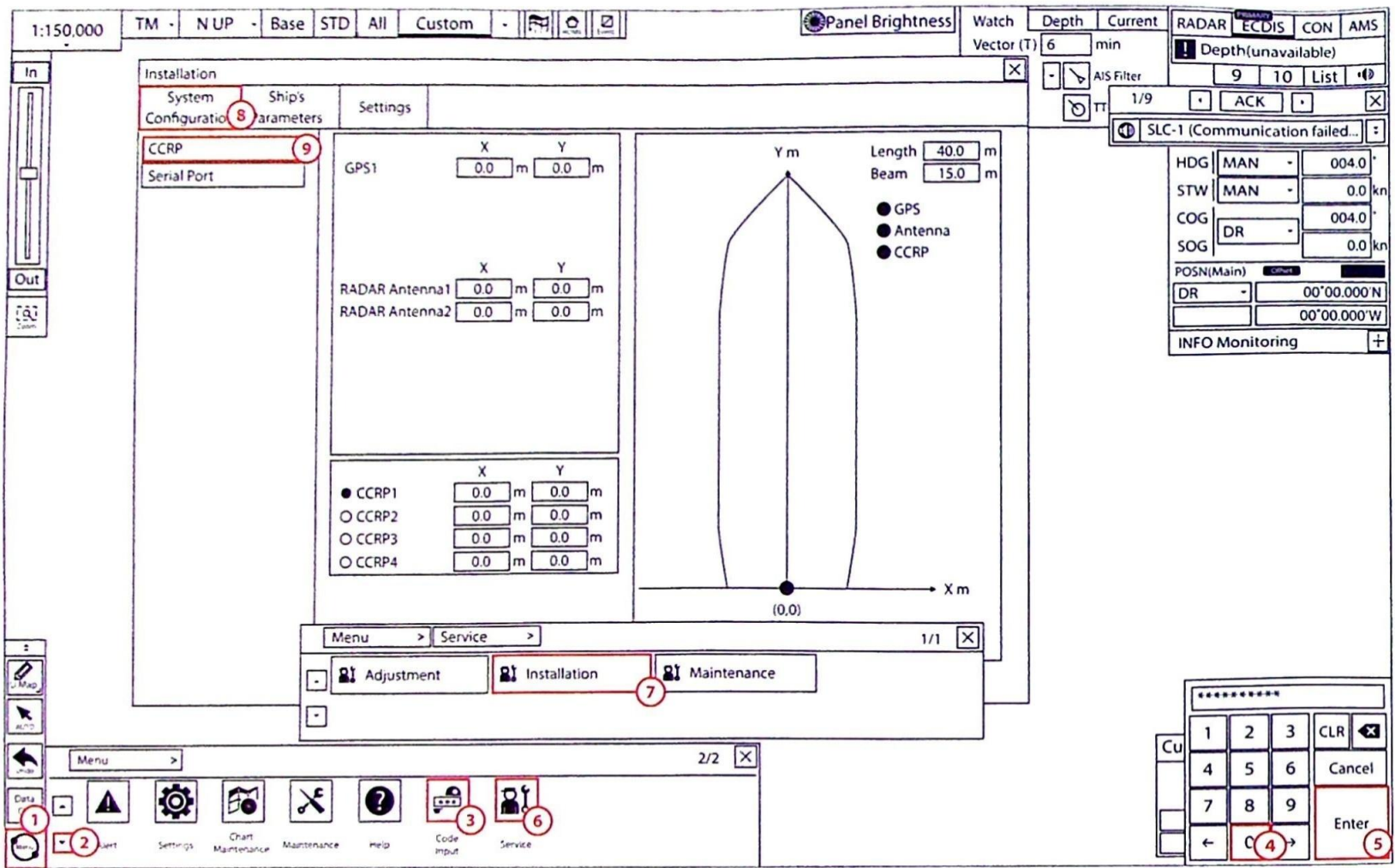
1.3 Range/Scale/Motion



- 1 Click the scale dropdown menu.
- 2 Select a scale or range from the list.
- 3 Click the ship motion button to change between 'TM', 'RM' and 'Free'.

- 4 Click 'Menu'.
- 5 Click 'Settings'.
- 6 Select 'Chart'.
- 7 Change 'Border Range' (TM reset), as required.

1.4 Setting CCRP



1 Click 'Menu'.

2 Click the down arrow.

3 Click 'Code Input'.

4 Enter Code: '0'.

5 Click 'Enter'.

6 Click 'Service'.

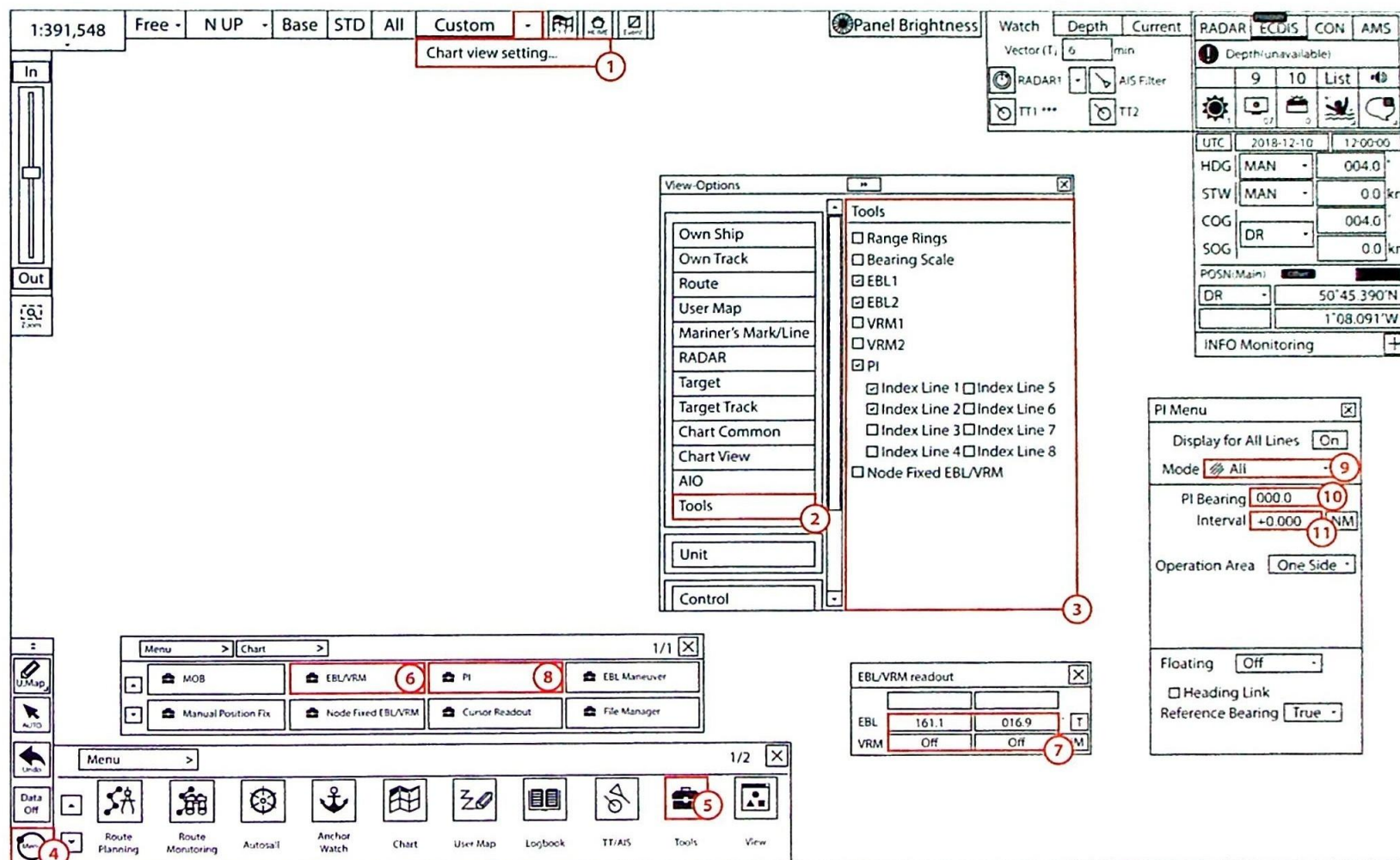
7 Click 'Installation'.

8 Select 'System Configuration'.

9 Select 'CCRP'.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



1 Click 'Chart view setting...' from the dropdown.

2 Select 'Tools'.

3 Enable/disable PI, EBL or VRM, as required.

4 Click 'Menu'.

5 Click 'Tools'.

6 Click 'EBL/VRM'.

7 Click the boxes to turn on or off.

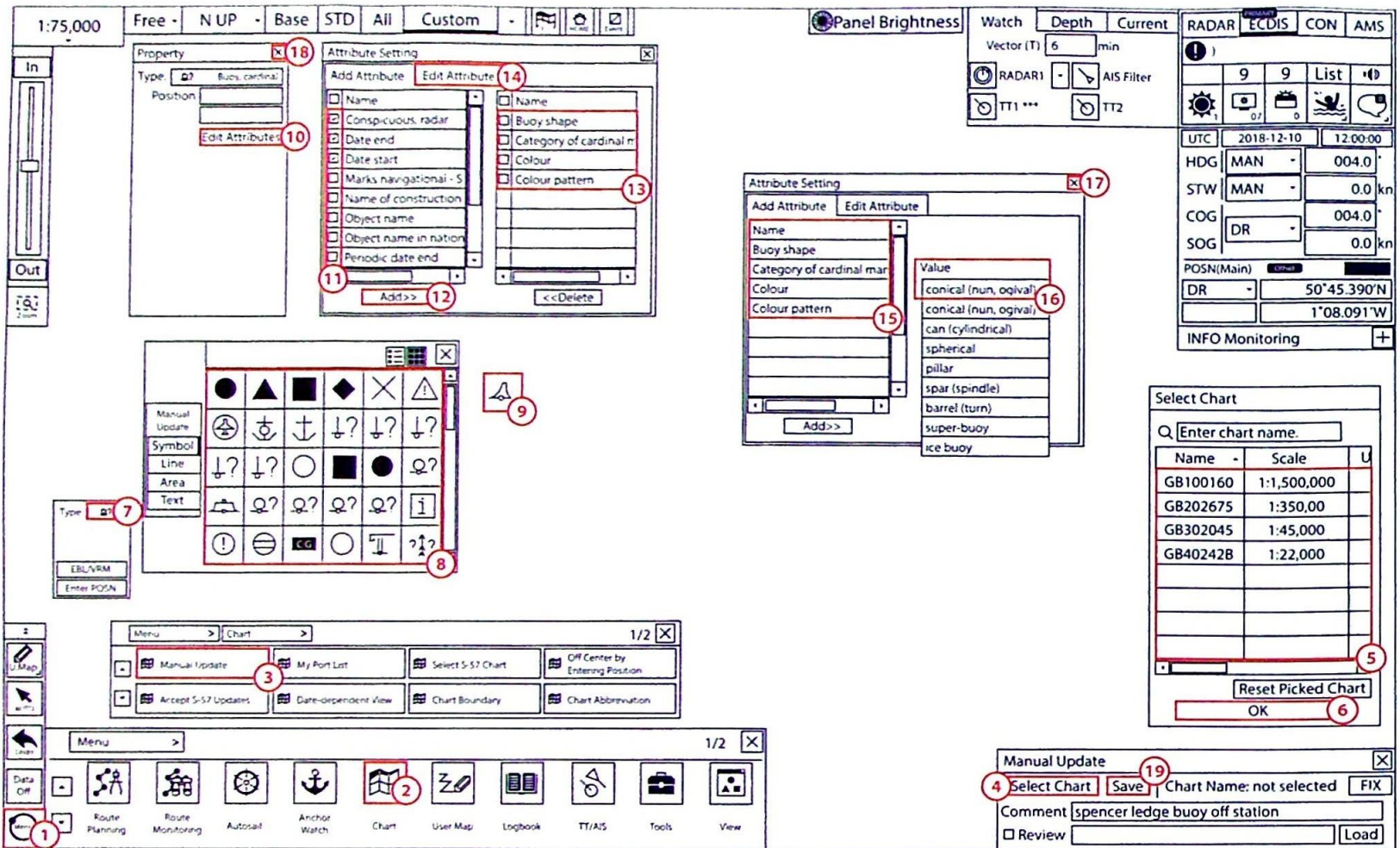
8 Click 'PI'.

9 Select 'Mode' from the dropdown.

10 Insert 'Bearing', as required.

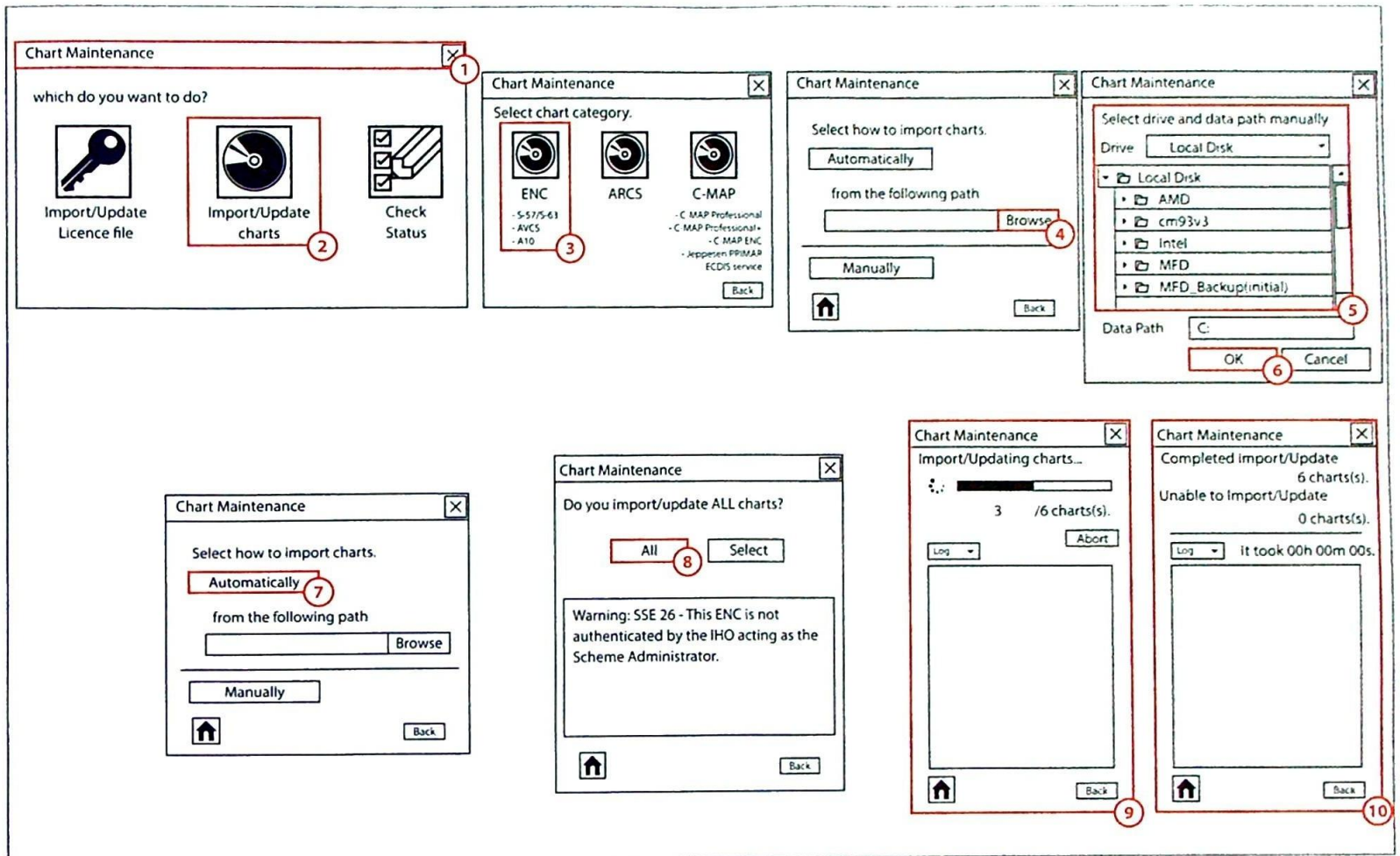
11 Insert 'Interval', as required.

2.2 Manual Corrections



- 1 Click 'Menu'.
- 2 Click 'Chart'.
- 3 Click 'Manual Update'.
- 4 Click 'Select Chart'.
- 5 Select a chart from the list available.
- 6 Click 'OK'.
- 7 Click on the 'Type' field.
- 8 Select a symbol, as required.
- 9 Left click to place the symbol on the chart.
- 10 Click 'Edit Attributes'.
- 11 Tick the boxes for attributes you would like to edit.
- 12 Click 'Add'.
- 13 Selected object will be moved.
- 14 Click 'Edit Attribute'.
- 15 Select an attribute to edit.
- 16 Adjust values, as required.
- 17 Exit 'Attribute Setting'.
- 18 Exit 'Property'.
- 19 Click 'Save'.

2.3 Chart Updates

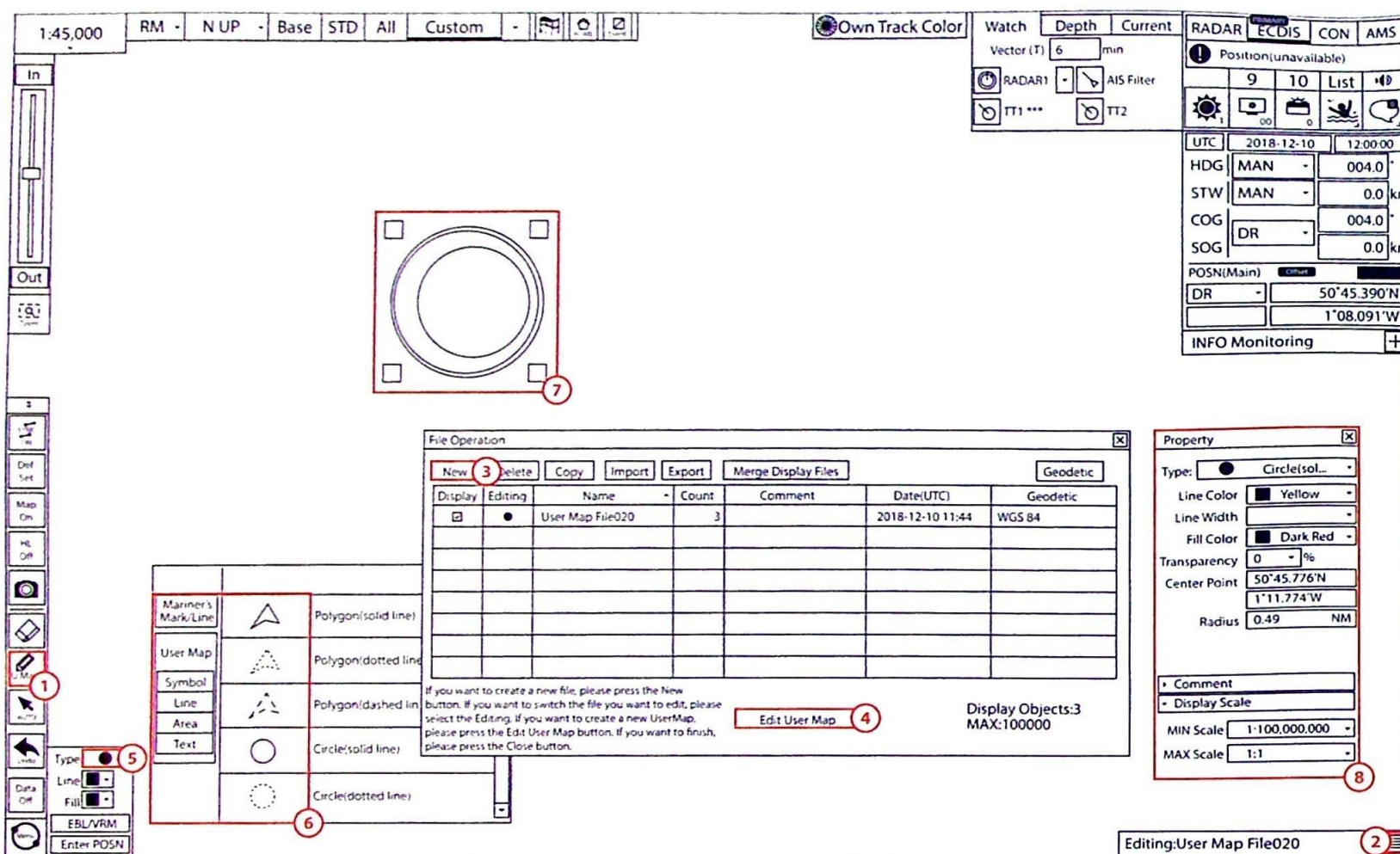


- 1 To update your charts you must exit ECDIS mode and enter 'Chart Maintenance' mode.
- 2 Click 'Import/Update charts'.
- 3 Click 'ENC'.

- 4 Click 'Browse'.
- 5 Select the folder containing your charts.
- 6 Click 'OK'.
- 7 Click 'Automatically'.

- 8 Click 'All'.
- 9 Installation will begin.
- 10 Installation completed.

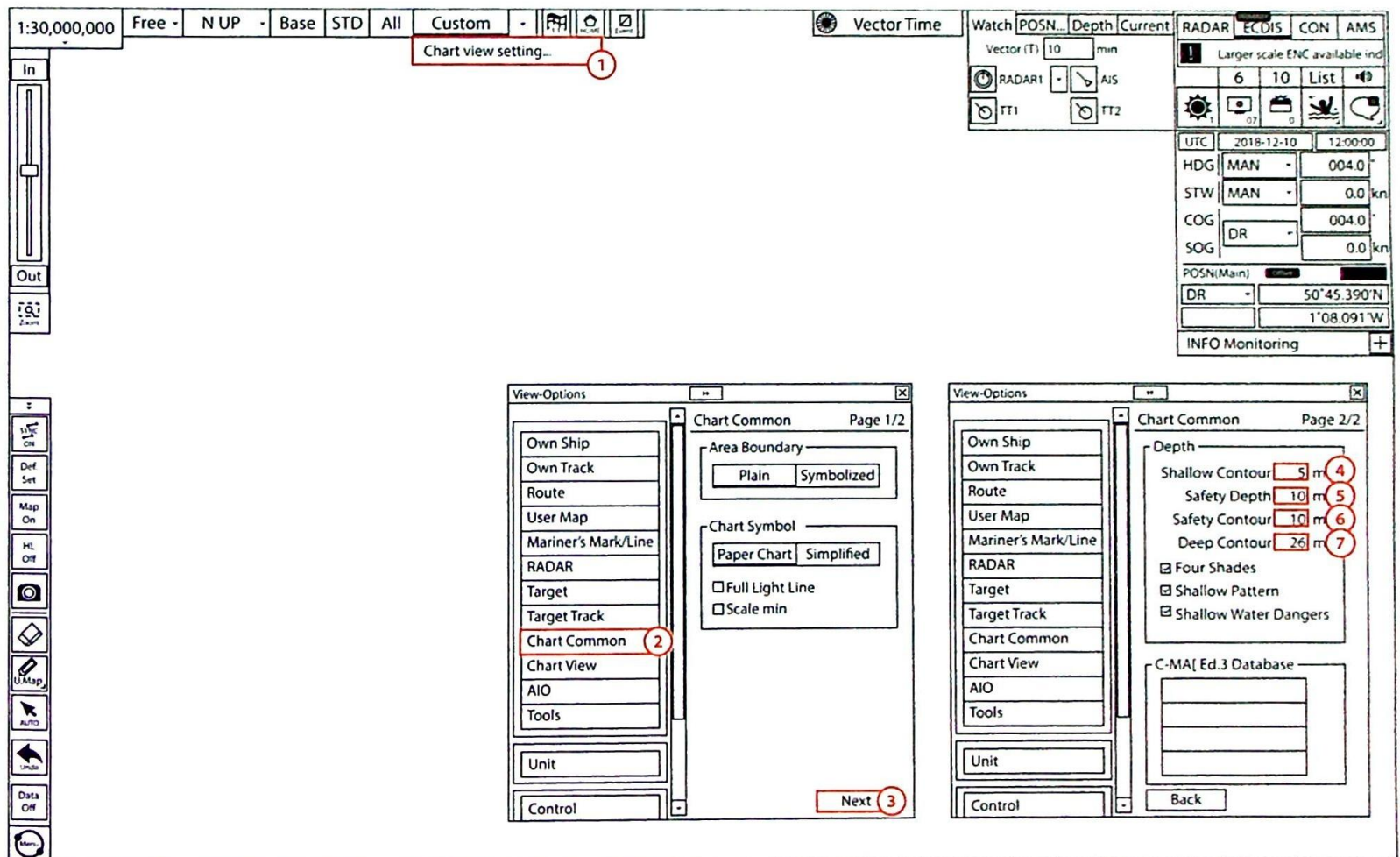
2.4 No Go Areas/User Charts



- 1 Click 'U-Map'.
- 2 Click the 'U-Map' list button.
- 3 Click 'New'.
- 4 Click 'Edit User Map'.
- 5 Click 'Type'.
- 6 Select an object type and an object.
- 7 Left click to place your object on the chart.
- 8 Edit object properties, as required.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour



1 Click 'Chart view setting...' from the dropdown.

2 Select 'Chart Common'.

3 Click 'Next'.

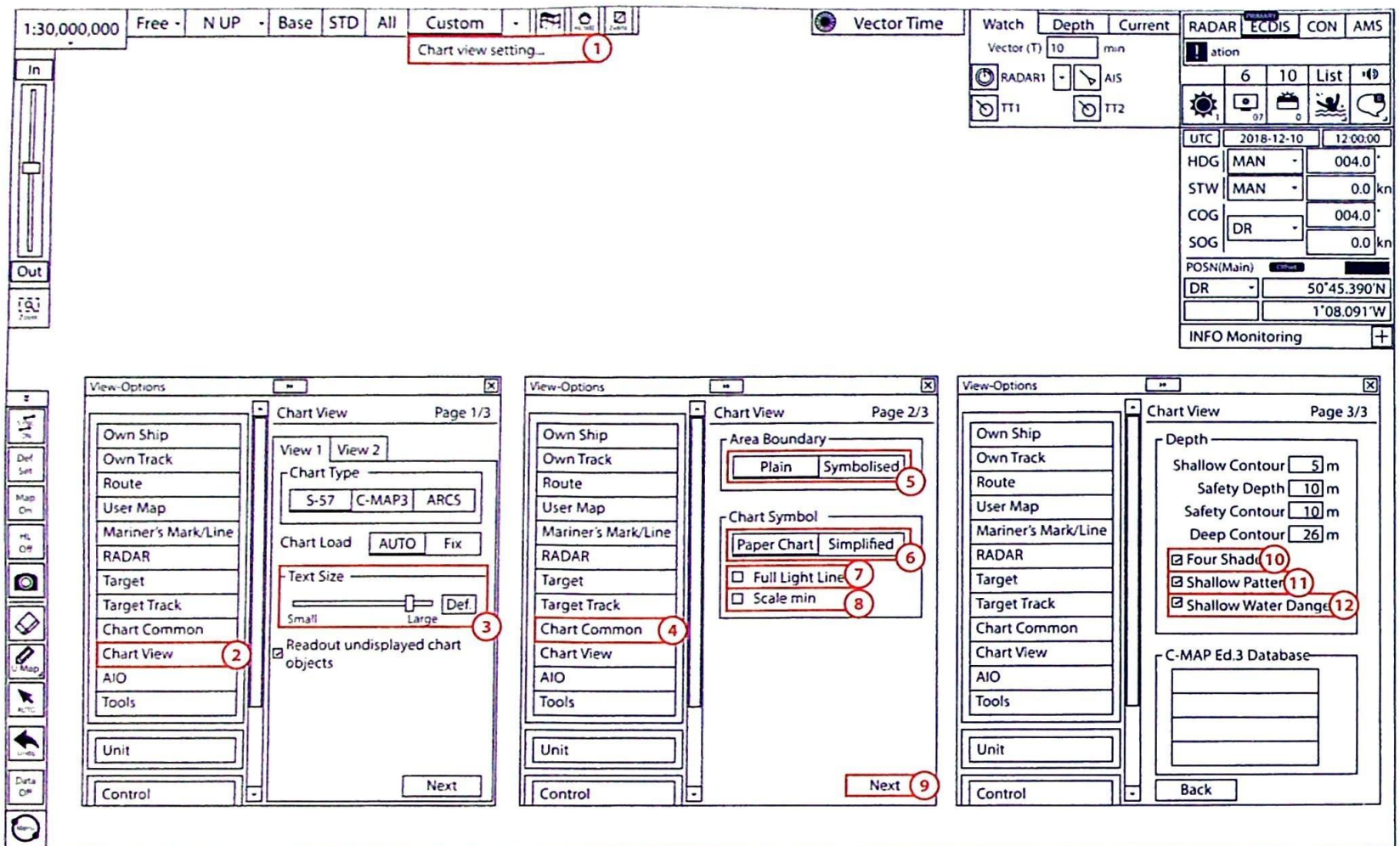
4 Adjust 'Shallow Contour'.

5 Adjust 'Safety Depth'.

6 Adjust 'Safety Contour'.

7 Adjust 'Deep Contour'.

3.2 Display Preference Options

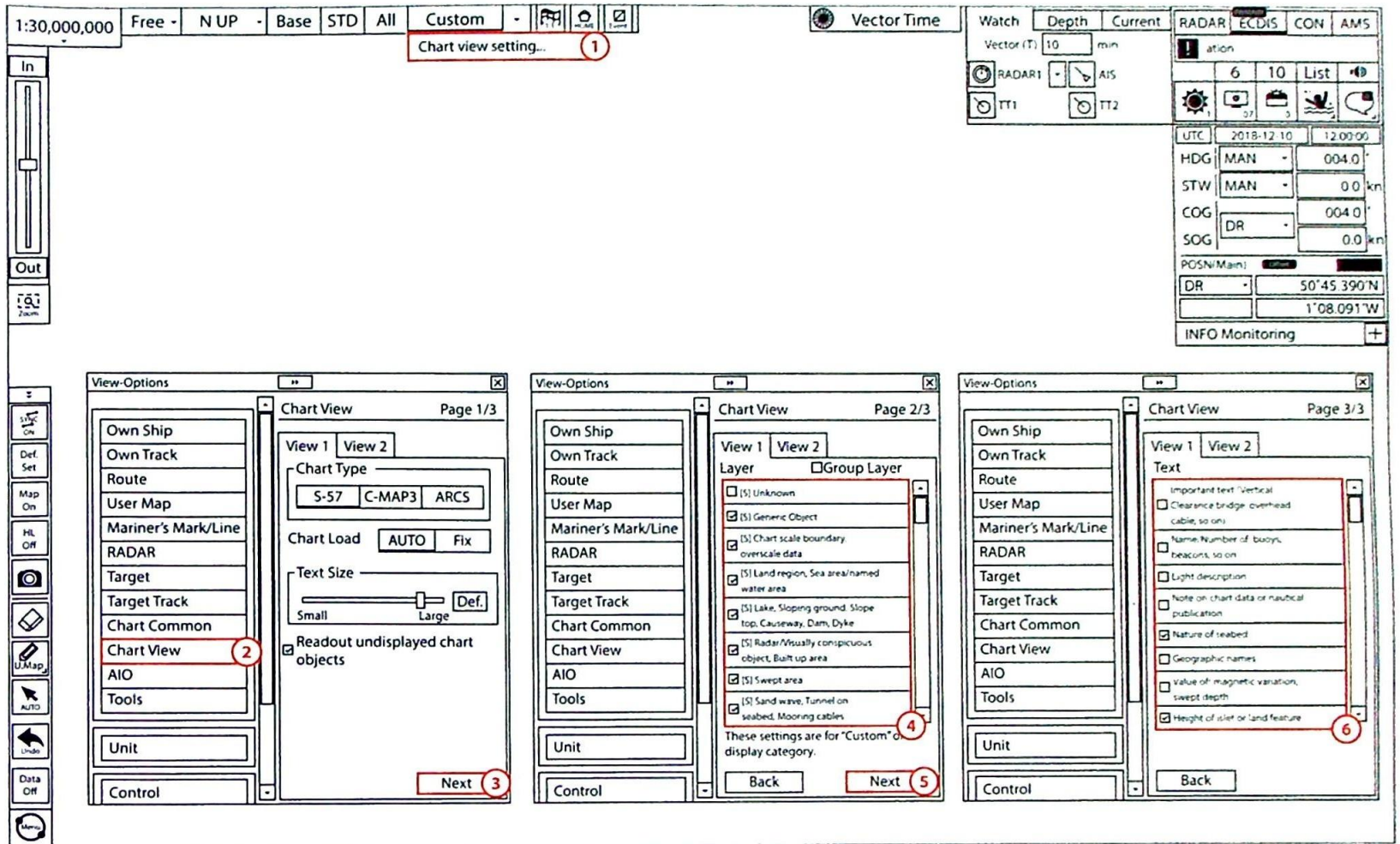


- 1 Click 'Chart view setting...' from the dropdown.
- 2 Select 'Chart View'.
- 3 Adjust text size.
- 4 Select 'Chart Common'.
- 5 Select 'Plain' or 'Symbolised'.

- 6 Select 'Paper Chart' or 'Simplified'.
- 7 Enable/disable 'Full Light Line'.
- 8 Enable/disable 'Scale minimum'.
- 9 Click 'Next'.
- 10 Enable/disable 'Four Shades'.

- 11 Enable/disable 'Shallow Pattern'.
- 12 Enable/disable 'Shallow Water Dangers'.

3.3 Display Configuration



1 Click 'Chart view setting...' from the dropdown.

2 Select 'Chart View'.

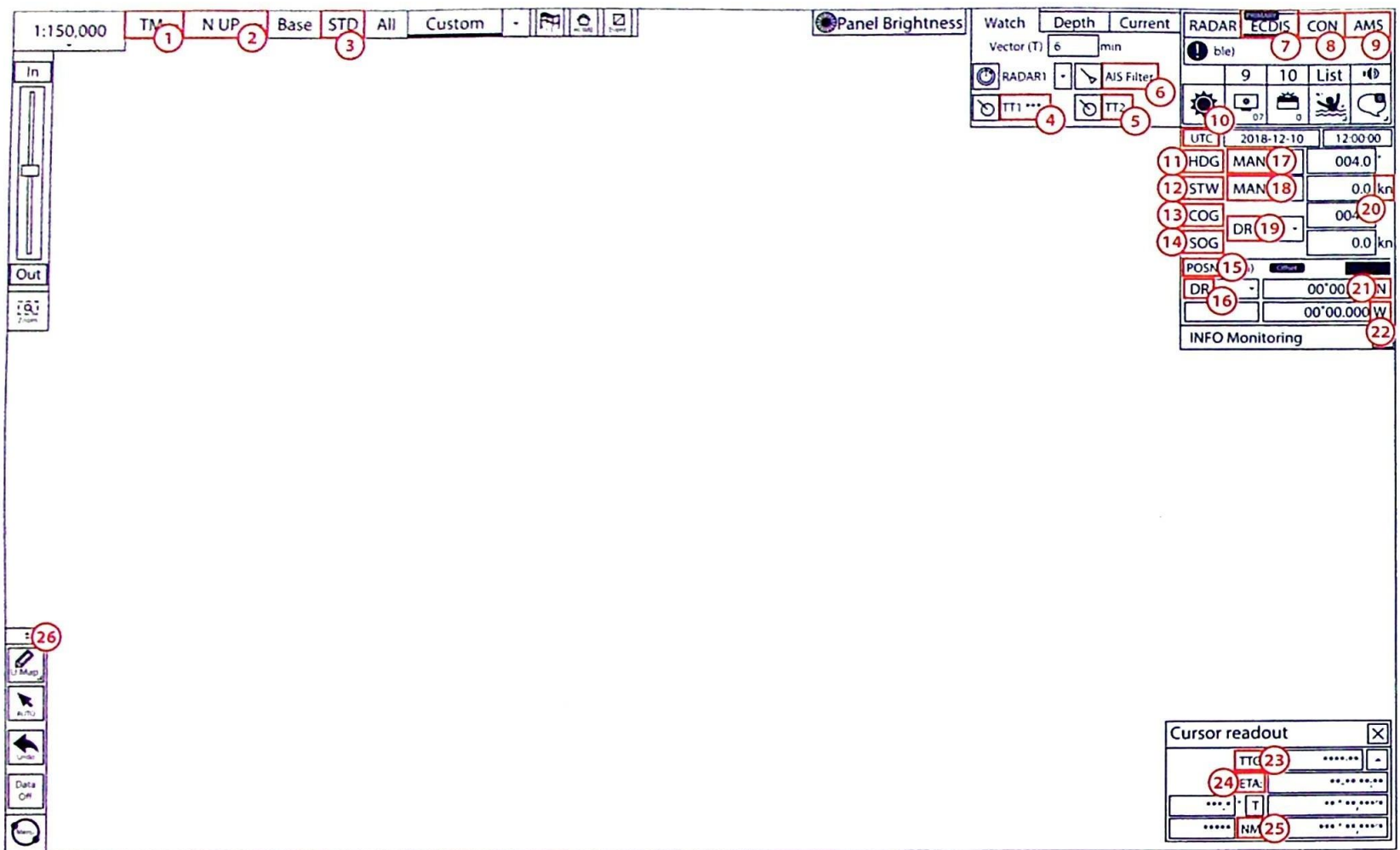
3 Click 'Next'.

4 Enable/disable layers by ticking or unticking the tick boxes.

5 Click 'Next'.

6 Enable/disable layers by ticking or unticking the tick boxes.

3.4 Abbreviations Part 1

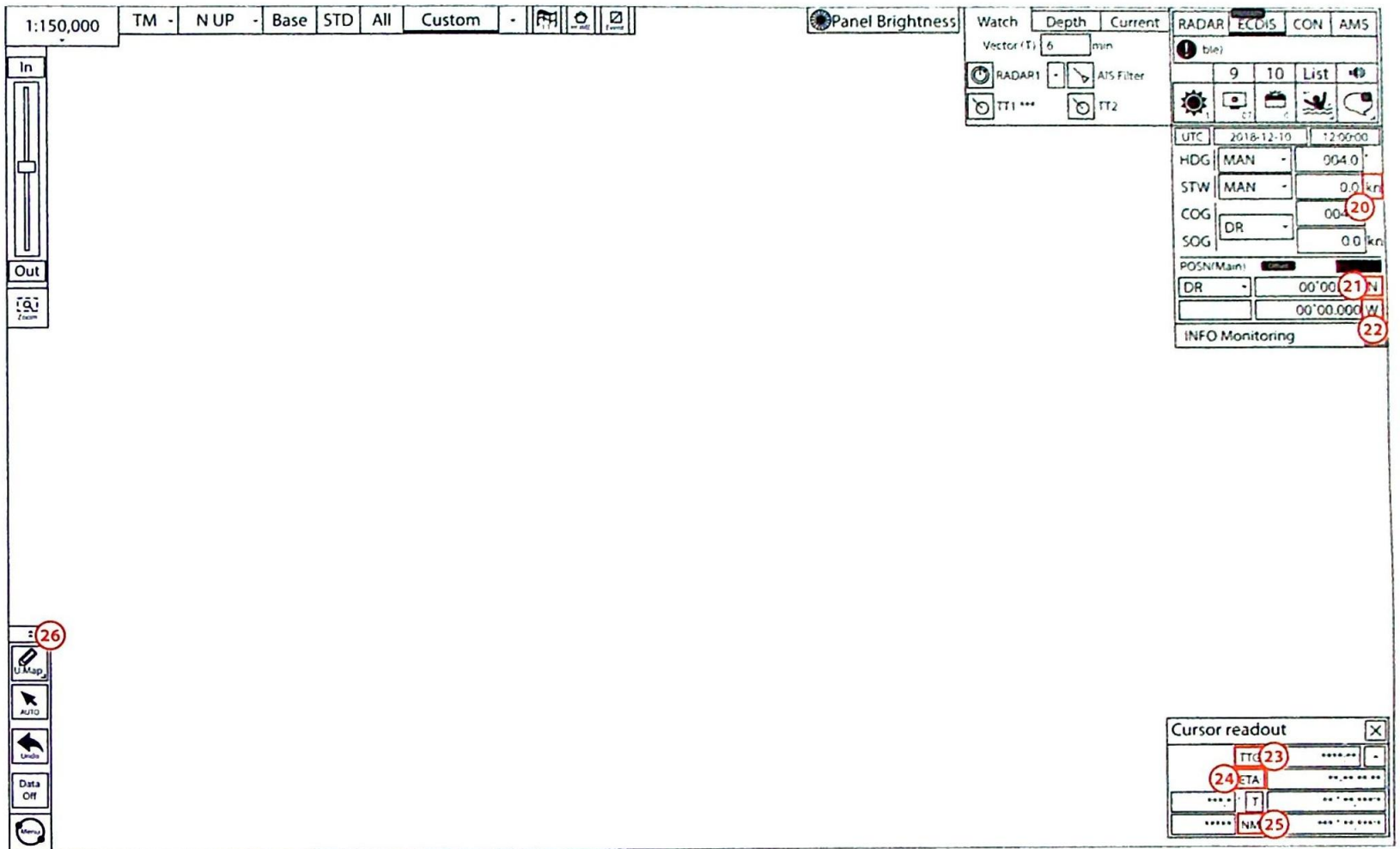


- 1 True Motion
- 2 North Up
- 3 Standard
- 4 Tracked Targets
- 5 Tracked Targets
- 6 Automatic Information System

- 7 Electronic Chart Display and Information System
- 8 Conning
- 9 Alarm Management System
- 10 Universal Time Coordinated
- 11 Heading
- 12 Speed Through Water

- 13 Course Over Ground
- 14 Speed Over Ground
- 15 Position
- 16 Dead Reckoning
- 17 Manual
- 18 Manual
- 19 Dead Reckoning

3.4 Abbreviations Part 2



20 Knots

23 Time to Go

26 User Map

21 North

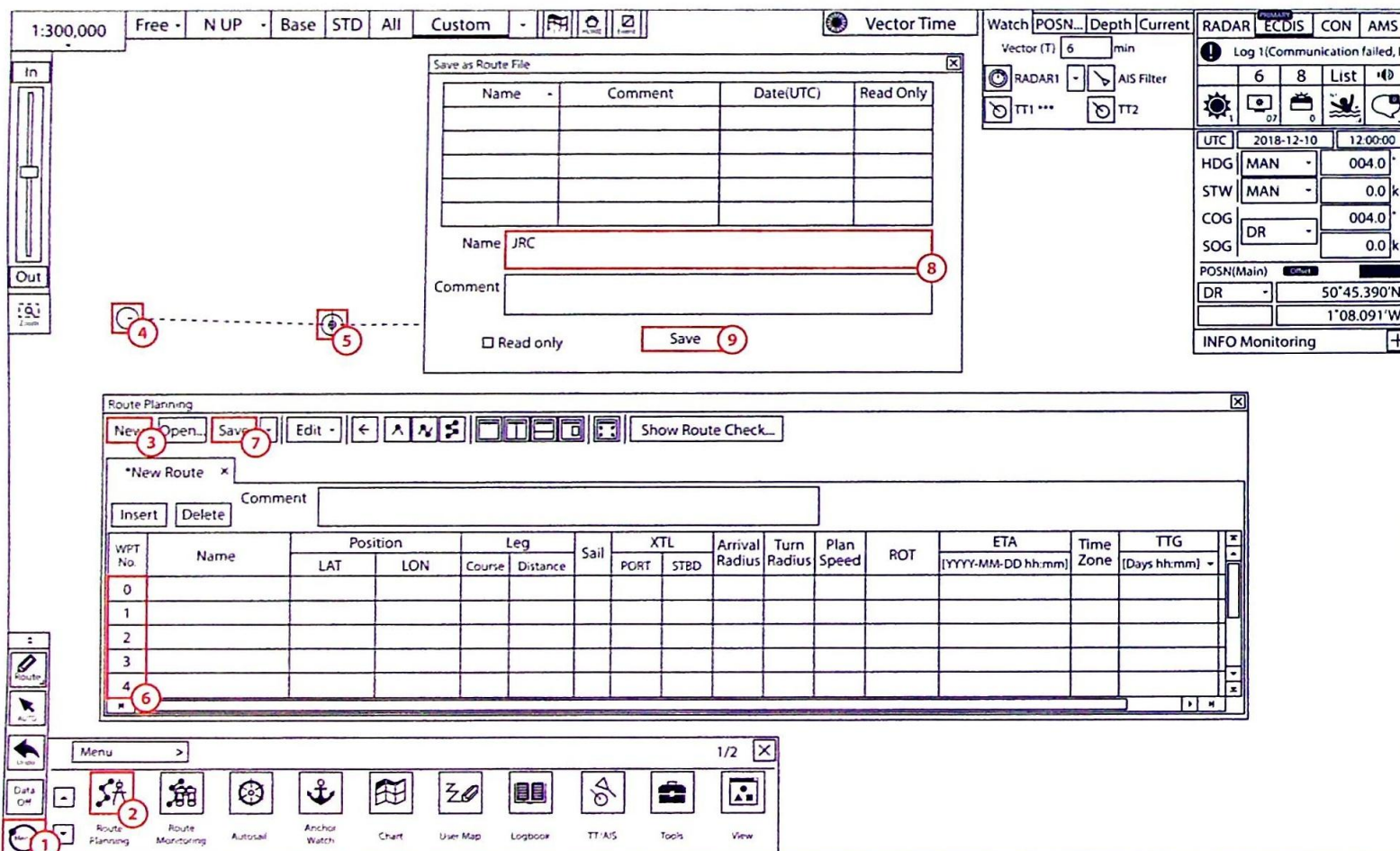
24 Estimated Time of Arrival

22 West

25 Nautical Miles

Section 4: Route Planning

4.1 Creation



1 Click 'Menu'.

2 Click 'Route Planning'.

3 Click 'New'.

4 Left click on the chart to place your first waypoint.

5 Consecutive left clicks will place more waypoints.

6 Waypoints will appear in the route table.

7 Click 'Save'.

8 Name your route.

9 Click 'Save'.

4.2 Route Checking

The screenshot shows the ECDIS interface with the 'Check Route' dialog box open. The dialog box has two tabs: 'Safety Check' and 'Limit Check'. The 'Safety Check' tab is active, showing a table with the following data:

WPT -	Cause	Result
<input checked="" type="checkbox"/> 000-0 01	AtoN	Pass
<input checked="" type="checkbox"/> 000-0 01	AtoN	Pass
<input type="checkbox"/> 000-0 01	Safety contour	Error
<input type="checkbox"/> 000-0 01	Safety contour	Error
<input type="checkbox"/> 000-0 01		

Below the table are buttons for 'Jump', 'Disregard', and 'Reset'. A 'Safety limit' field is set to 10 m. The 'Route Planning' window below shows a 'Show Route Check...' button. Red callouts 1-6 indicate the following steps:

- Click 'Show Route Check...'
- Click 'Jump' to go to the selected hazard.
- Tick the box for hazards that you have checked.
- Click 'Disregard'.
- The result will change to 'Pass'.
- Click the 'X' when finished.

Note to user: JRC automatically checks the route as soon as waypoints are placed.

- 1 Click 'Show Route Check...'
- 2 Click 'Jump' to go to the selected hazard.
- 3 Tick the box for hazards that you have checked.
- 4 Click 'Disregard'.
- 5 The result will change to 'Pass'.
- 6 Click the 'X' when finished.

4.3 Optimisation/Schedule

The screenshot shows the ECDIS interface with the Route Planning window open. The main window has a top menu bar with 'Free', 'N UP', 'Base', 'STD', 'All', and 'Custom'. The Route Planning window has a toolbar with 'New', 'Open', 'Save', and 'Edit'. Below the toolbar is a 'Comment' field and 'Insert' and 'Delete' buttons. The main area is a table with the following columns: WPT No, Name, Position (LAT, LON), Leg (Course, Distance), Sail, XTL (PORT, STBD), Arrival Radius, Turn Radius, Plan Speed, ROT, ETA, Time Zone, and TTG. The table has 5 rows (0-4). Red circles 1-6 are placed on the 'Save' button in the main window, the 'Plan Speed' column, the 'ETA' column, the 'Time Zone' column, the 'TTG' column, and the 'Save' button in the Route Planning window.

1 Ensure you are editing a route and that you have some waypoints inserted.

2 Adjust speed as required for each leg of the route.

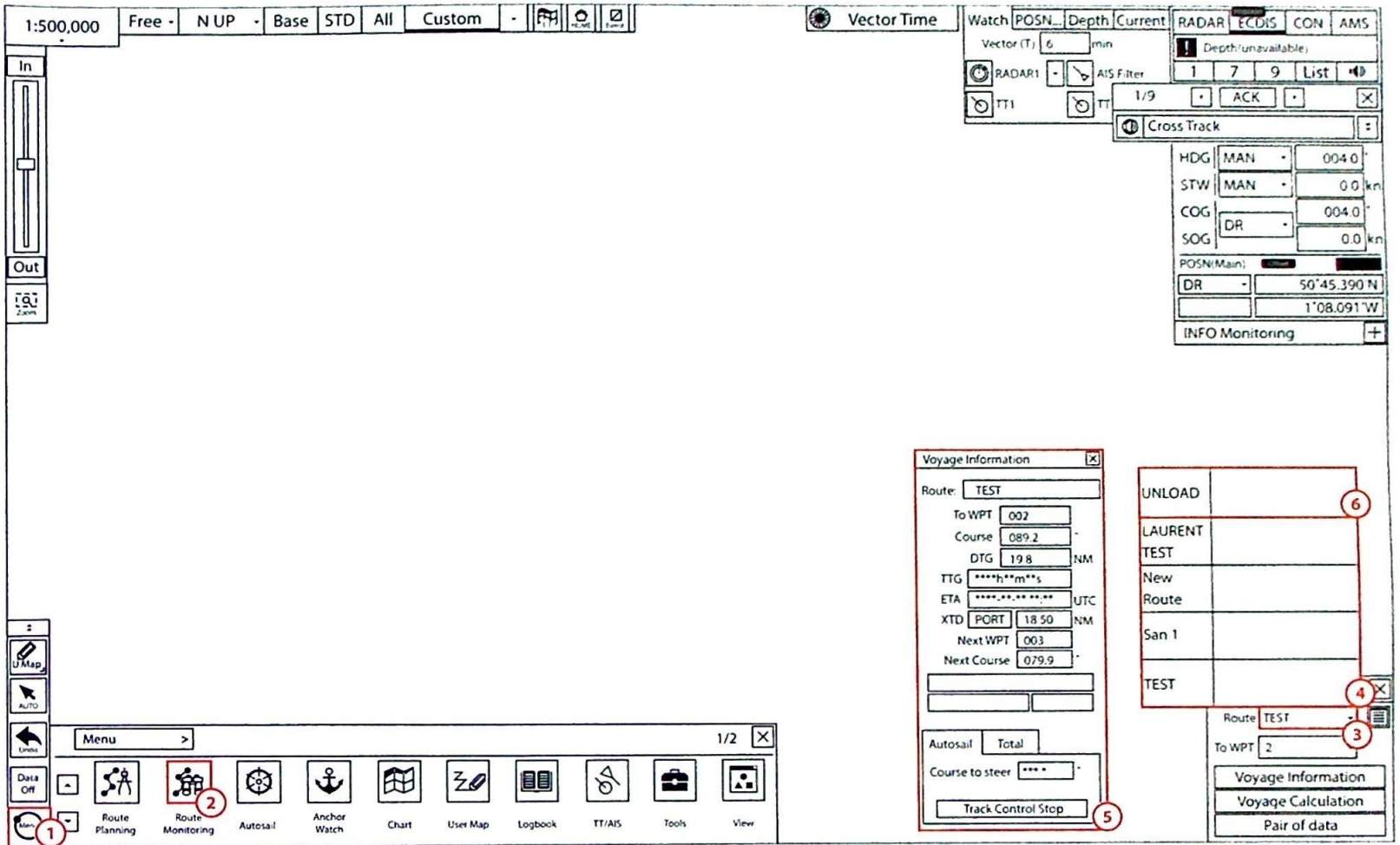
3 Adjust ETA for each leg of the route.

4 Insert time zone accordingly.

5 TTG will automatically change based on the details inserted into the route table.

6 Click 'Save' to ensure your changes have been saved.

4.4 Selecting Active Route



1 Click 'Menu'.

2 Click 'Route Monitoring'.

3 Click on the 'Route' dropdown menu.

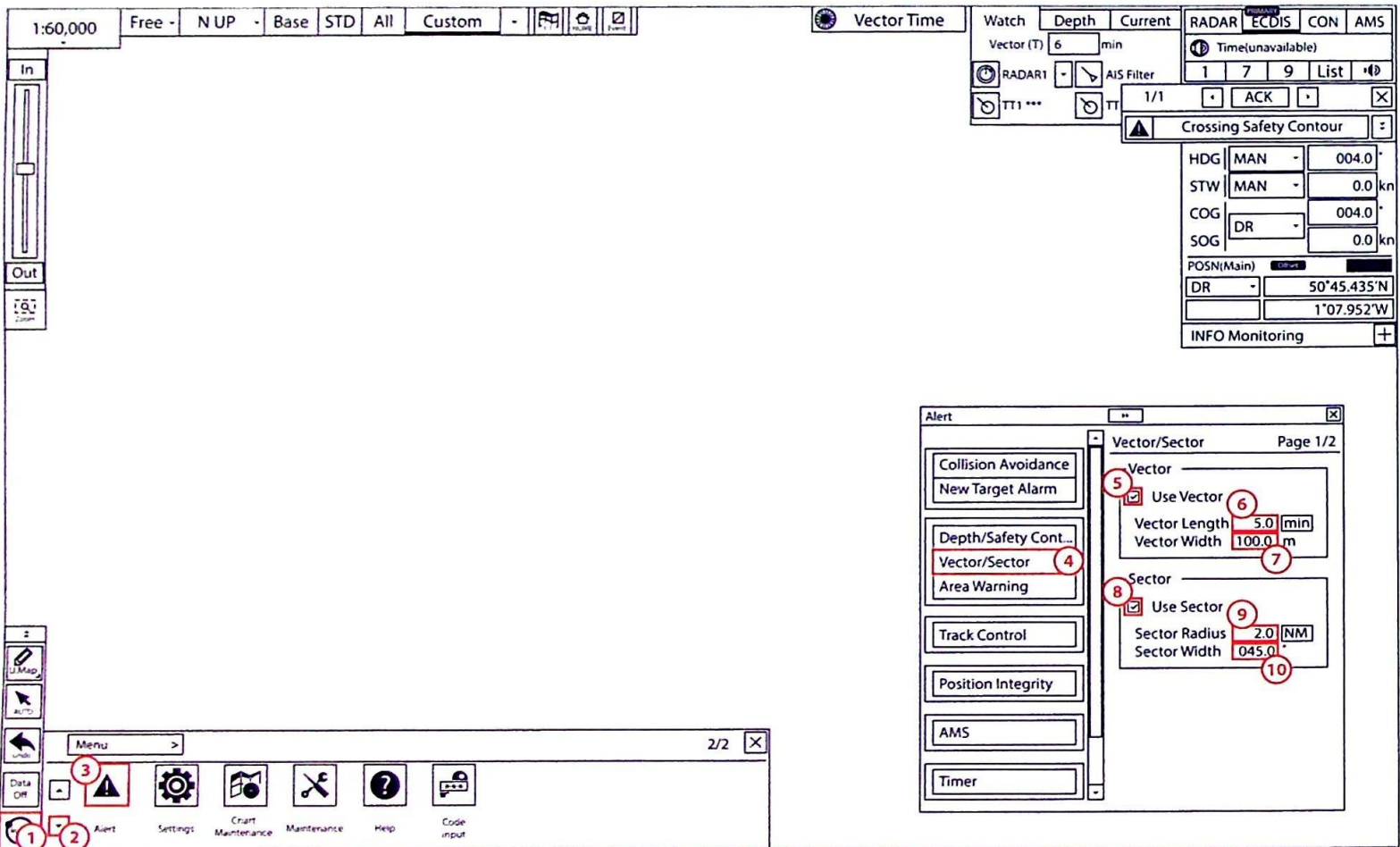
4 Select a route.

5 The 'Voyage Information' table will appear.

6 Click 'UNLOAD' when finished.

Section 5: Route Monitoring

5.1 Look-Ahead

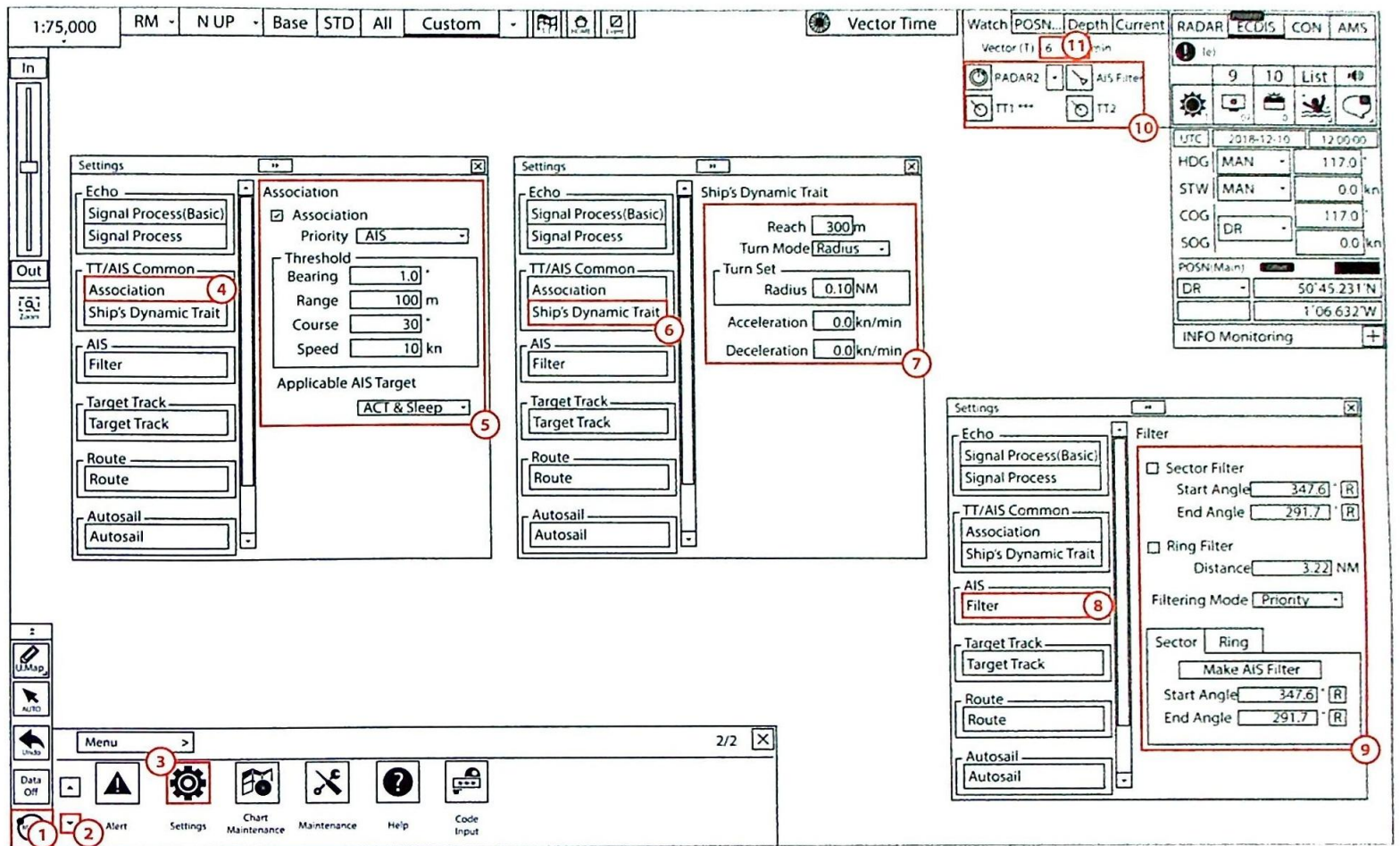


- 1 Click 'Menu'.
- 2 Click the down arrow.
- 3 Click 'Alert'.
- 4 Select 'Vector/Sector'.

- 5 Click the first tick box to enable 'Vector'.
- 6 Insert the vector length.
- 7 Insert the vector width.

- 8 Click the second tick box to enable 'Sector'.
- 9 Insert the sector radius.
- 10 Insert the sector width.

5.2 TT/AIS/Vectors



1 Click 'Menu'.

2 Click the down arrow.

3 Click 'Settings'.

4 Select 'Association'.

5 Adjust settings, as required.

6 Select 'Ship's Dynamic Trait'.

7 Adjust settings, as required.

8 Select 'Filter'.

9 Adjust settings, as required.

10 Left click to turn on/off options.

11 Change vector length, as required.

5.3 Position Fixing

The screenshot shows the ECDIS interface with the following elements and annotations:

- Map Area:** Shows a vessel icon and three reference points (LOPs) marked with red circles 6, 7, and 12. Lines connect these points to the 'Manual Position Fix' dialog box.
- Manual Position Fix Dialog:** A dialog box titled 'Manual Position Fix' with the following fields:
 - LOPs Fixing: 4 (Total: 3, MAX: 10)
 - Obs 1: s Time
 - Date: *12-13
 - Time: :08 (UTC)
 - Position: 50°45.579'N
 - (e.g. landmark): 1°05.484'W
 - Bearing: 064.4 (8)
 - Distance: **** NM
 - Transfer Position Line:
 - HDG/STW: HDG/STW COG
 - HDG: 117.0 Set 117.0
 - STW: 010 kn Drift: 10.0 kn
 - Buttons: Set (9), Delete, Plot, Plot by cursor, Clear all lines (10)
- Select LOP or TPL Dialog:** A dialog box titled 'Select LOP or TPL' with the following table:

Name	Date(UTC)
<input checked="" type="checkbox"/> LOP1	2018-12-13 13:43:08
<input checked="" type="checkbox"/> LOP2	2018-12-13 13:43:14
<input checked="" type="checkbox"/> LOP3	2018-12-13 13:43:28
<input type="checkbox"/>	
<input type="checkbox"/>	

 An 'OK' button (13) is at the bottom.
- Menu and Tools:** A 'Menu' dropdown is open, showing 'Manual Position Fix' (3) selected. A 'Tools' dropdown is also open, showing 'Tools' (2) selected.
- Right Panel:** Shows various data fields including UTC (2018-12-10 12:00:00), HDG (MAN 117.0), STW (MAN 0.0 kn), COG (DR 117.0), SOG (0.0 kn), POSN(Main) (50°45.231'N, 1°06.632'W), and INFO Monitoring (+).

- 1 Click 'Menu'.
- 2 Click 'Tools'.
- 3 Click 'Manual Position Fix'.
- 4 Select 'LOPs Fixing'.
- 5 Choose between 'Bearing' and 'Distance'.
- 6 Left click on your first reference point.
- 7 Left click on your vessel.
- 8 Insert actual bearing/range.
- 9 Click 'Set' and repeat steps 6 to 9 at least one more time.
- 10 Click 'Plot'.
- 11 Choose the sensor to apply the offset.
- 12 Select LOPs to be used for the fix.
- 13 Click 'OK' to accept the fix.

5.4 Playback

The screenshot shows the ECDIS interface with the Playback window open. The Playback window has a title bar with a close button (9). Inside, there is a date field (2017-04-05 12:29:18) and a play button (8). Below the play button is a 'Select Intervals(UTC)' section with 'Start', 'Interval', and 'End' fields. A table below this section shows playback intervals for different data sources. The table is as follows:

Local Disk	Oldest Date(UTC)	Latest Date(UTC)
Local Disk	2017-04-05 12:29:18	2017-04-05 13:01:49
ALM	2017-04-05 12:29:18	2017-04-05 09:08:45
OWN	2017-04-05 12:29:18	2017-04-05 09:08:45
ROT	2017-04-05 12:29:18	2017-04-05 09:08:45
TGT	2017-04-05 13:04:45	2017-04-05 14:04:05

At the bottom of the Playback window is a 'Playback Information' section with fields for Chart, Scale, Edition, Edition Date(UTC), ARCS Datum Offset, and Ship's Position Offset. The interface also shows a 'Menu' bar at the bottom with icons for Alert, Settings, Chart Maintenance, Maintenance, Help, and Code Input. A 'Cursor readout' window is visible on the right side of the screen.

1 Click 'Menu'.

2 Click the down arrow.

3 Click 'Code Input'.

4 Enter Code '9999'.

5 Click 'Enter'.

6 ECDIS will now exit. Click the 'Playback' option.

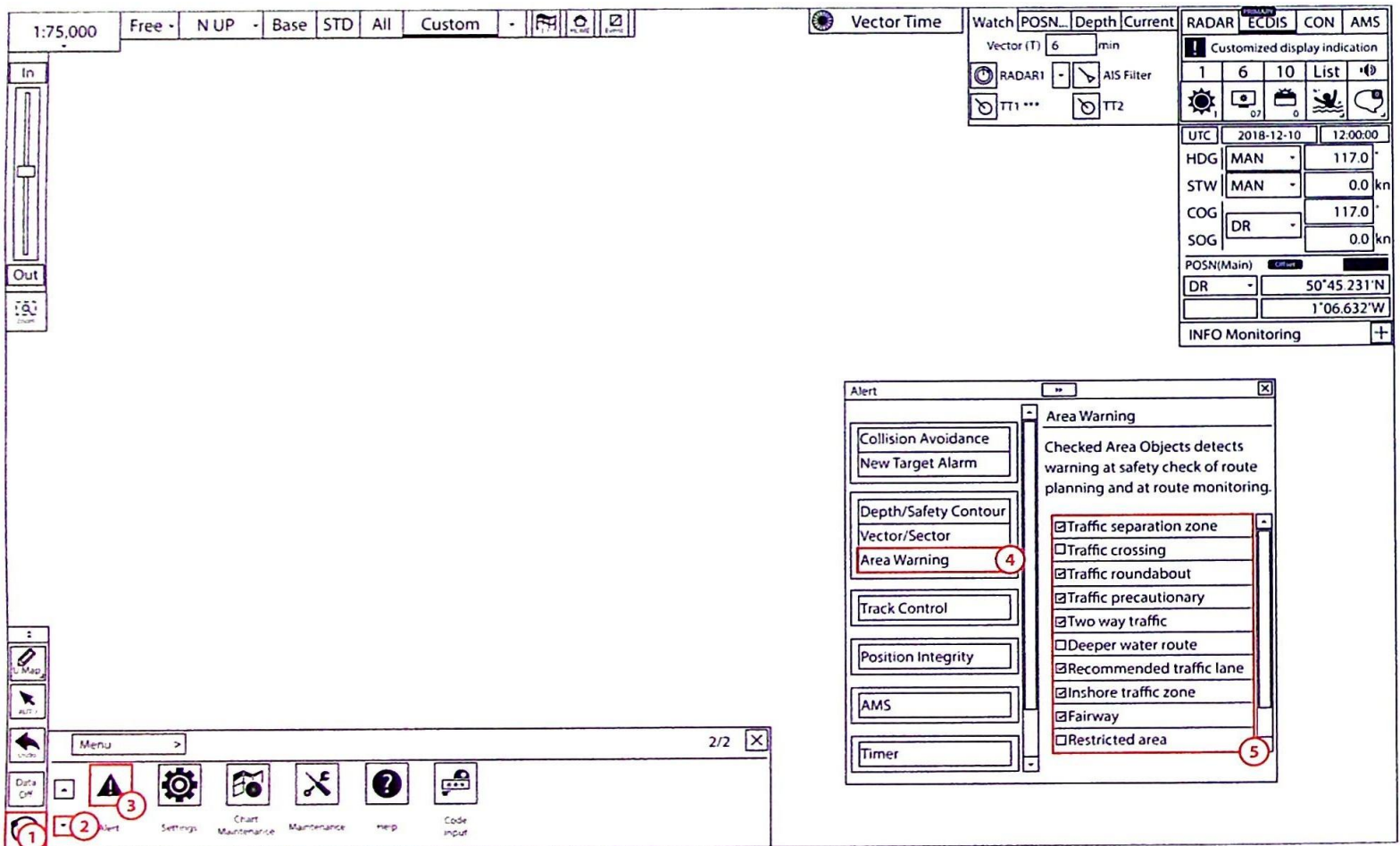
7 Select date.

8 Click 'Play'.

9 Press 'X' to close playback.

Section 6: System Settings

6.1 Warning/Alarm Configuration



1 Click 'Menu'.

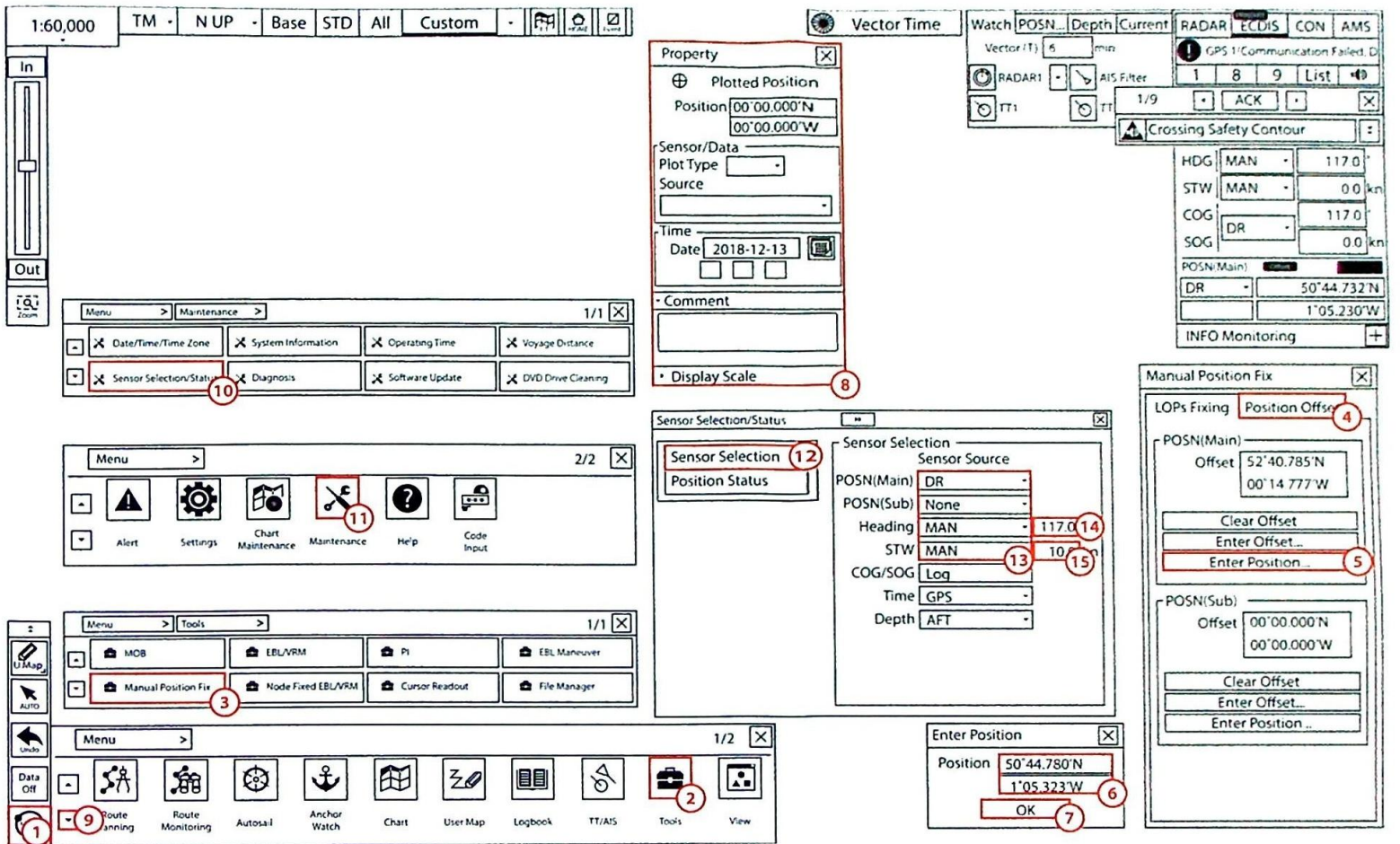
2 Click the down arrow.

3 Click 'Alert'.

4 Select 'Area Warning'.

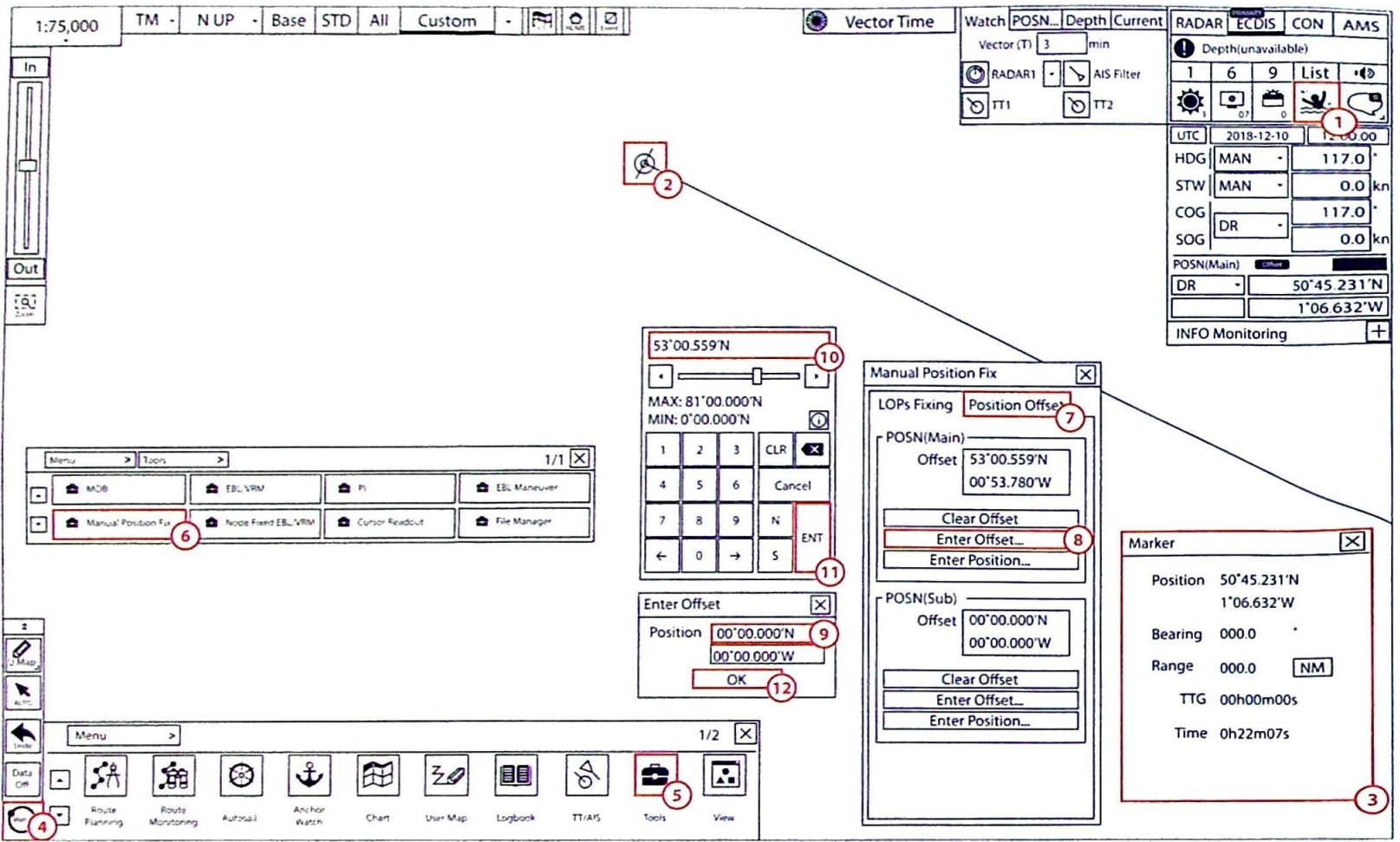
5 Tick and untick zones to enable/disable them.

6.2 Position/Heading/Speed



- 1 Click 'Menu'.
- 2 Click 'Tools'.
- 3 Click 'Manual Position Fix'.
- 4 Select 'Position Offset'.
- 5 Click 'Enter Position...'
- 6 Manually enter a position, as required.
- 7 Click 'OK'.
- 8 'Plotted Position' window will open.
- 9 Click the down arrow.
- 10 Click 'Sensor Selection/Status'.
- 11 Click 'Maintenance'.
- 12 Select 'Sensor Selection'.
- 13 Select sensor sources, as required.
- 14 Insert manual heading.
- 15 Insert manual speed.

6.3 Emergency Menus



1 Click on the MOB button.

2 A marker will be placed on your chart.

3 Marker information window will open.

4 Click 'Menu'.

5 Click 'Tools'.

6 Click 'Manual Position Fix'.

7 Select 'Position Offset'.

8 Click 'Enter Offset...'

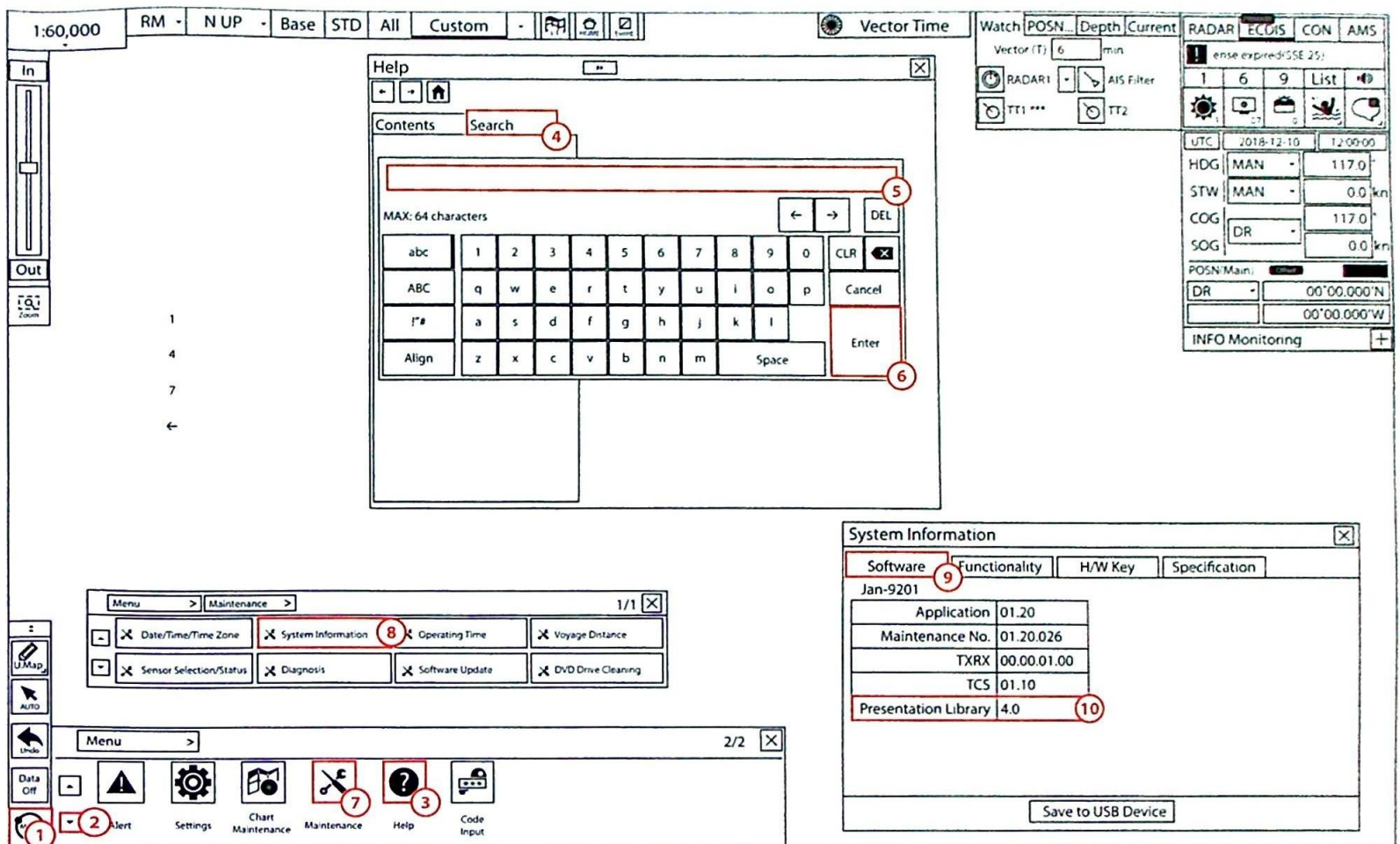
9 Click the position box to type a manual position.

10 Enter manual position.

11 Click 'ENT' (Enter).

12 Click 'OK' to accept the manual position.

6.4 Manual/About



- 1 Click 'Menu'.
- 2 Press the down arrow.
- 3 Click 'Help'.
- 4 Click 'Search'.

- 5 Type your search term.
- 6 Press 'Enter' to search.
- 7 Click 'Maintenance'.
- 8 Click 'System Information'.

- 9 Select 'Software'.
- 10 Information such as PL version is available here.

8. Kelvin Hughes Manta Digital ZM ECDIS – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Main Chart Panel		
	Own Ship		User Maps
	True Motion Settings		Own Ship Settings
	N-UP		Docking Display
	Head-Up		Position Fixing
	Course UP		NAVTEX
	Set Chart		Anchor Watch
	Scale		Nav Tools
	Profile		Route Data
	Time		Mariner Notes/Events
	Nav Data		Stabilised
	Chart Settings		Man Overboard
	Extended Route Data		Video Settings
	Target Data		Display Mode
	Radar Control		Alarms
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Nav Tools		
	Cursor		VRM
	PI		VRM 1 (ON/OFF)
	Add PI Line		EBL
			EBL 1 (ON/OFF)
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart Settings		
	General		Time Validity
	Advanced		Display all time dependent objects (ON/OFF)
	Soundings		Query
	Safety Contour		Chart 1 Symbols
	Scamin Enabled (ON/OFF)		Data Accuracy (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Route Data		User Maps
	Route		
	General		Mariner Notes/Events
	Alerts		

Kelvin Hughes Manta Digital ZM ECDIS – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Route Data		General	
	Display		Auto Load NMEA Route
	Route		Alternative Route
	Channel Limits	Alerts	
	WPT Labels		Edit Critical Points
	Leg Annotation		
	Steering Info		
	Pilotage Tools		
	Head and Stern Marks		
	Distance to Run		

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

StandBy Mode	
	Chart Maintenance

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Nav Data			
	Select Gyro Sensor		Depth Below Keel
	Select Speed Source		Fix Position
	Select Position Sensor		Check Position
	Change Datum		

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alarms	
	Acknowledge Alert
	Expand Alert List

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Own Ship Settings		Time	
	Own Ship		UTC
	Past Tracks		Local
	Look-Ahead (ON/OFF)		Time Source
	Vector Length Predictor Vessel Outlines (ON/OFF)		Time Zone
	Replay Voyage Data		
	Wreck (ON/OFF)		

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

Hard copy of Operator's Manual only available

Kelvin Hughes Manta Digital ZM ECDIS

Key Kelvin Hughes Manta Digital ZM ECDIS Menu Functions		
1.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	Desktop>ECDIS Setup
2.	View list of installed Charts	Charts>Install>Vector or ARCS
3.	View the latest update number installed	Left click on the Chart Display>Cell Information
4.	Change Chart Settings	Charts>Vector Chart Settings
5.	View information on charted objects and view additional text	Left click on the Chart Display>Features
6.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Main Menu>Safety Settings...>Depth
7.	Input a User Map Object	Tools>Map Editing...
8.	Input a Manual Update	Charts>Update>Manual ENC
9.	Turn the Predictor on	Tools>User Preferences...>Vessel Prediction
10.	Configure the Guardzone (Anti-grounding Cone)	Main Menu>Safety Settings...>Guardzone Context Menu>Overlays>Guardzone
11.	Configure Ship's Track	Main Menu>Track Settings...
12.	Configure Velocity Vectors	Main Menu>Safety Settings>Settings
13.	View past Alarms and Warnings	Information Panel>Alarms
14.	Input a Visual or Radar Fix	Tools>Position Fixing...
15.	Turn on Overlays (Route, Predictor, Guardzone, Primary Track, etc.)	Context Menu>Overlays

Chart Panel

Functional Panel

Kelvin Hughes RCDS
Main Menu

Heading Man 074.0°
Speed Man 00.0 kts
COG DR 074.0°
SOG 00.0 kts
Time U 14.01.19
Depth Sm *****

Sensor Simulator 1
50°20'950"N 0°08'498"E
Datum WGS84

Information Panel

Route: Pilotage Plymouth
Manual Steering
(No Route Selected)

Alt. (No Fix Selected)

XTE TS

Dist to WOP
Time to WOP
ETA at final WOP

Tools

50°32'713"N
0°57'816"E
33.64 nm
Brg 069.5°

No ENC Data Available. Please refer to RCDS or paper chart

Select Waypoint Position Context Menu

Route Planning										
Route: Pilotage Plymouth										
WP	Name	I	Latitude	Longitude	Type	RL	T	Distance	Speed	Chart
001	1	••	50°20'215"N	004°09'742"W	Normal	RL	224.0°	0.77 nm	0.77 nm	(12.0) (500 m)
002	2	••	50°19'663"N	004°10'578"W	Normal	RL	0.3°	1.57 nm	2.33 nm	12.0 500 m
003	3	••	50°18'118"N	004°10'578"W	Normal	RL	0.3°	1.57 nm	2.33 nm	12.0 500 m
004	4	••	50°16'462"N	004°25'000"W	Normal	RL	30.4°	9.90 nm	12.24 nm	12.0 500 m

Undo Last Add WP Delete WP Reverse Route Print Route Full Check Safety Check Save Route Close

Kelvin Hughes ECDIS ← Display Identifier

Main Menu → Main Menu

Own Ship Data ←

Heading	T	062.5°
Speed	W	22.0 kts
COG	DR	062.5°
SOG		22.0 kts
Time	+01H	17.11:29
Depth	Sim1	22.3 m

Position Data →

Sensor	D Simulator 1
Position	55°33.433'N 009°47.802'E
Datum	WGS84

Chart Menu ← Charts

Routes Menu → Routes

Steering Mode ← TRACK CONTROL

Selected Route → Saltmere to Bonville

Alternative Route ← Alt. (No Route Selected)

Cross Track Error → XTE 55 m CTS 064.0°

Waypoint ← WP7 : Cartwheel Point

Distance to Wheel Over → Dist to WOP 1.64 nm

Time to Wheel Over ← Time to WOP 00:04:29

ETA at Final Waypoint → ETA at final WP 17:24 03/01

Tools Menu ← Tools

Cursor Position Data →

Position	55°33.473'N 009°45.164'E
Rng	1.49 nm
Brg	271.6°

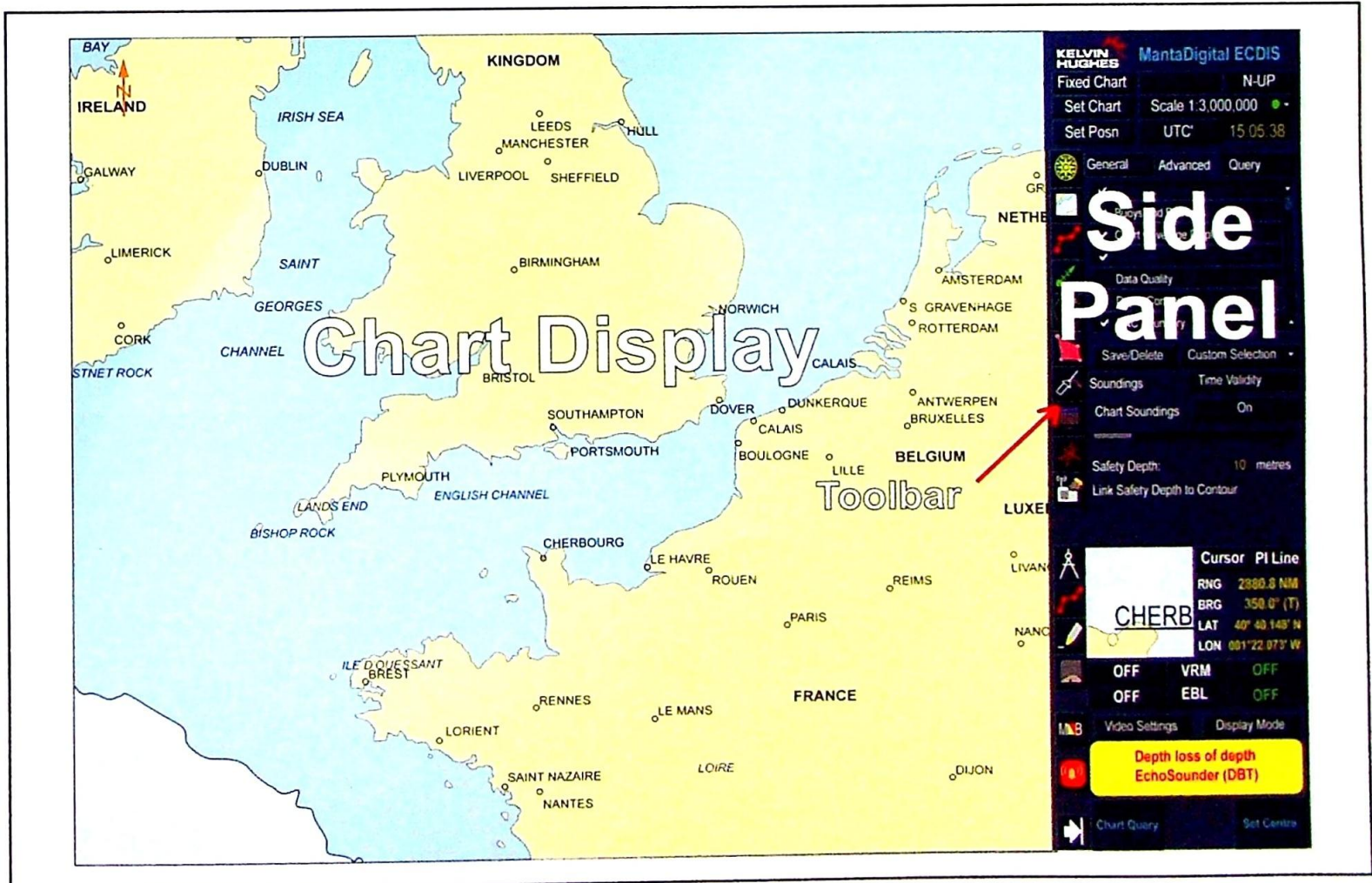
Alarm Messages ← Track Control Stopped

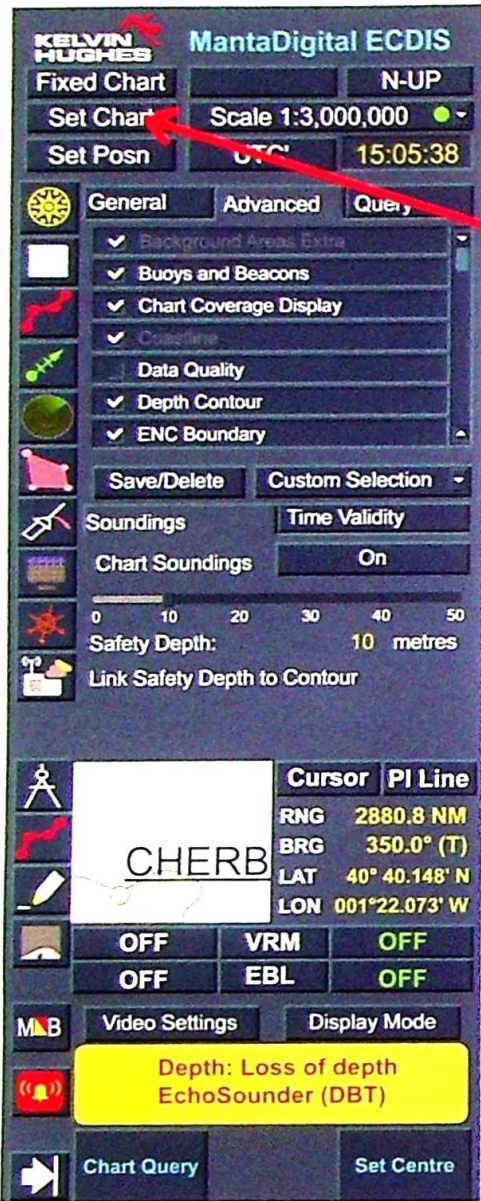
Push Button Function Indications ←

Select Query Feature		Context Menu
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
Kelvin Hughes New Manta Digital ZM ECDIS

Key Kelvin Hughes New Manta Digital ZM ECDIS Menu Functions		
1.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	Standby Screen>Own Ship Tab
2.	View list of installed Charts	Chart Maintenance>Chart View or Dataview Tab>(Filters)
3.	View the latest update number installed	Chart Maintenance>Check Chart Update Status
4.	Change Chart Settings	ECDIS>Chart Settings Icon>Advanced Tab
5.	View information on charted objects and view additional text	ECDIS>Chart Settings Icon>Query Tab (left click)
6.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	ECDIS>Chart Settings Icon>General + Advanced Tabs
7.	Input a User Map Object	ECDIS>User Map Icon>Edit Selected Map>Enter Object
8.	Input a Manual Update	Chart Maintenance>View Updates>Insert New Feature
9.	Turn the Predictor on	ECDIS>Own Ship Icon>Own Ship Tab
10.	Configure the Look-ahead (Anti-grounding Cone)	ECDIS>Own Ship Icon>Look-ahead Tab
11.	Configure Ship's Track	ECDIS>Own Ship Icon>Past Track Tab
12.	Configure Velocity Vectors	ECDIS>Own Ship Icon>Own Ship Tab
13.	View past Alarms and Warnings	ECDIS>Alarm (right click)
14.	Input a Visual or Radar Fix	ECDIS>Position Fixing Icon>LOP Tab>Fix Tab
15.	Turn on Radar Image Overlay	ECDIS>Radar Control Icon>Radar On





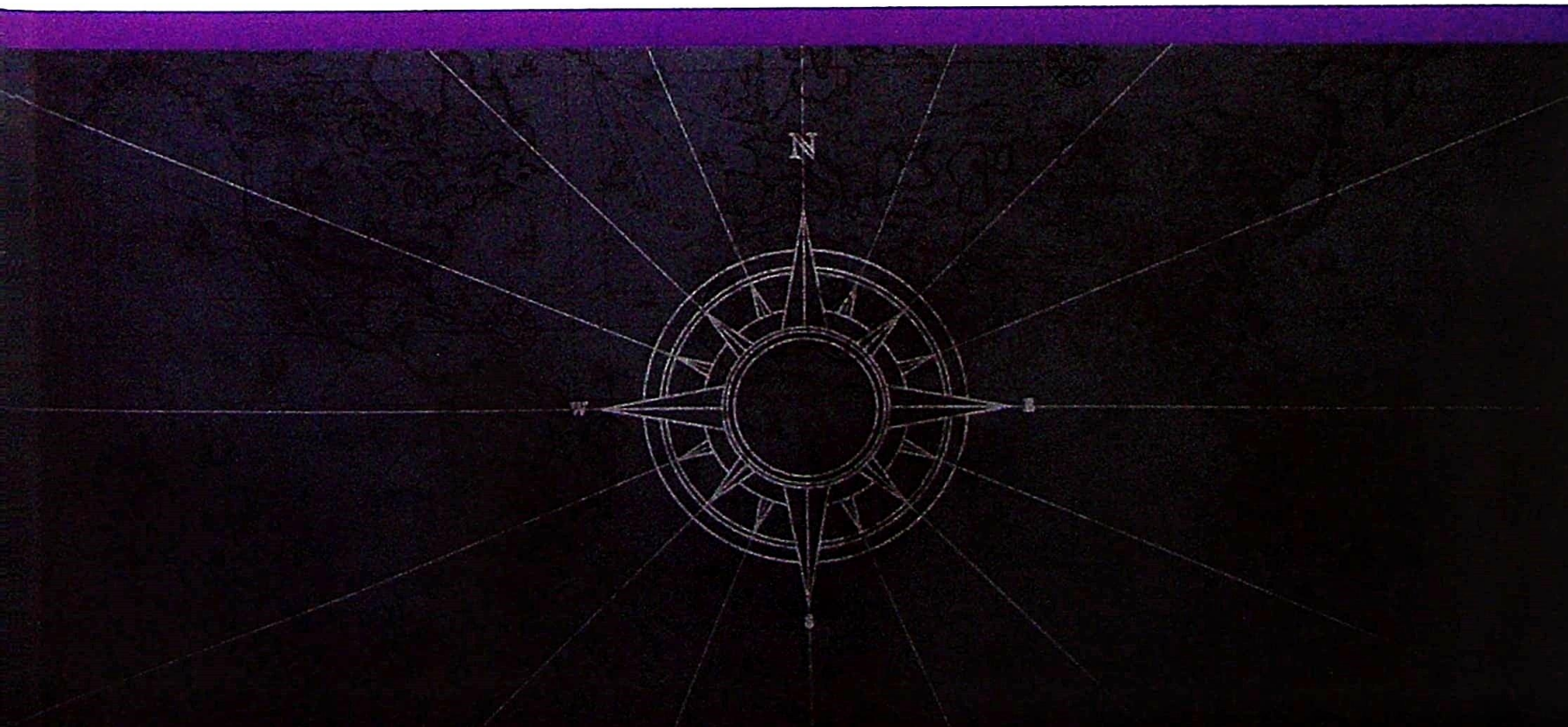
- ← Motion and Orientation
- ← Scale
- ← Time and Date
- ← Best Scale or Fixed Scale Chart
- ← General/Advanced and Query Pages
- ← Cursor Information
- ← VRM/EBL
- ← Video Settings and Display Mode
- ← Alarm List
- ← On-screen Cursor Buttons

- | | | | |
|---|---------------------|---|------------------------|
|  | Nav Data |  | NAVTEX |
|  | Chart Settings |  | Nav Tools |
|  | Extended Route Data |  | Route Data |
|  | Target Data |  | Mariner's Notes/Events |
|  | Radar Control |  | CCTV Control |
|  | User Maps |  | Man Overboard |
|  | Own Ship Settings |  | Alarms |
|  | Docking Display |  | Show/Hide Side Panel |
|  | Position Fixing | | |

Kelvin Hughes

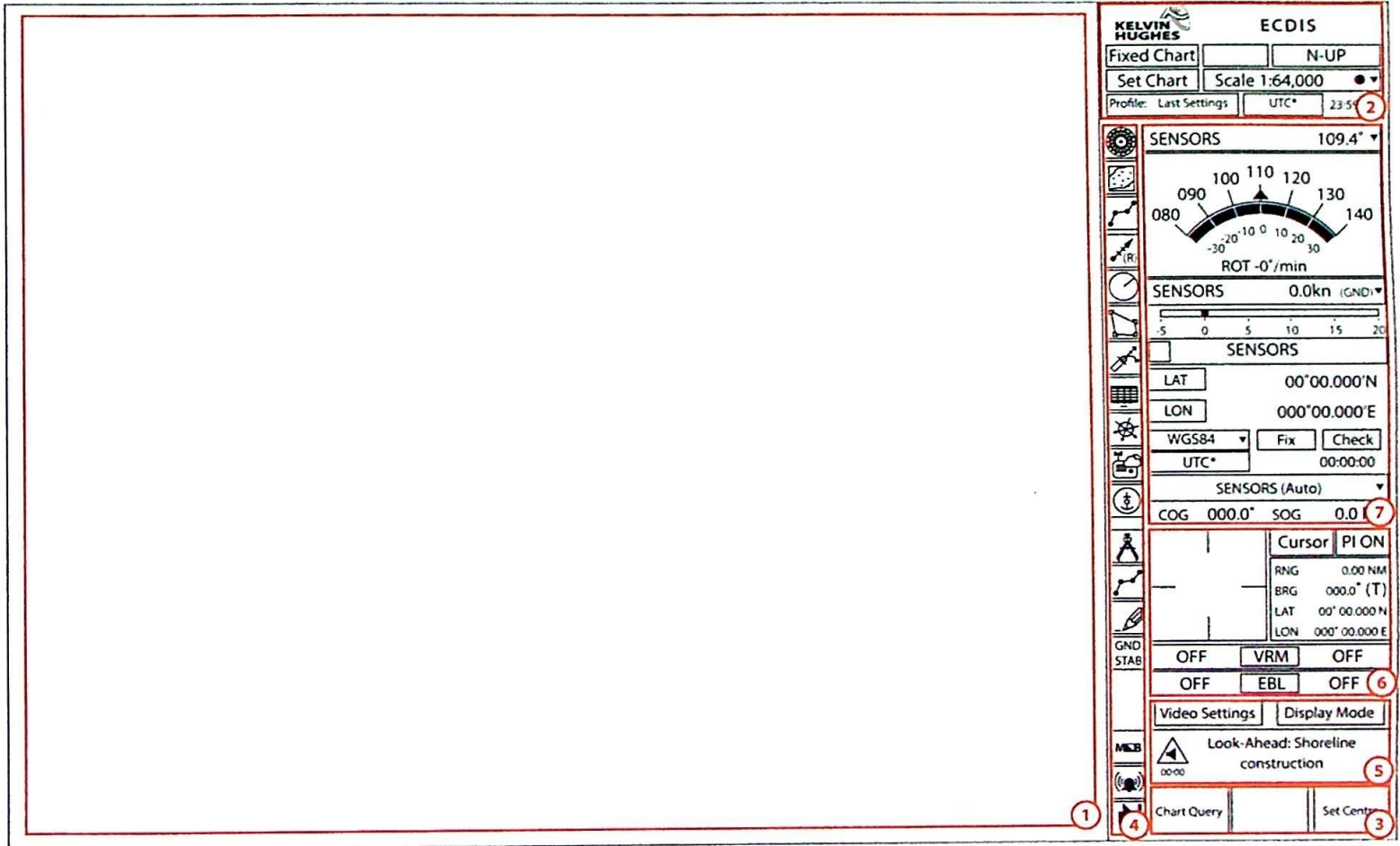
Manta Digital ZM ECDIS

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Section 1: Main Display

1.1 Screen Layout

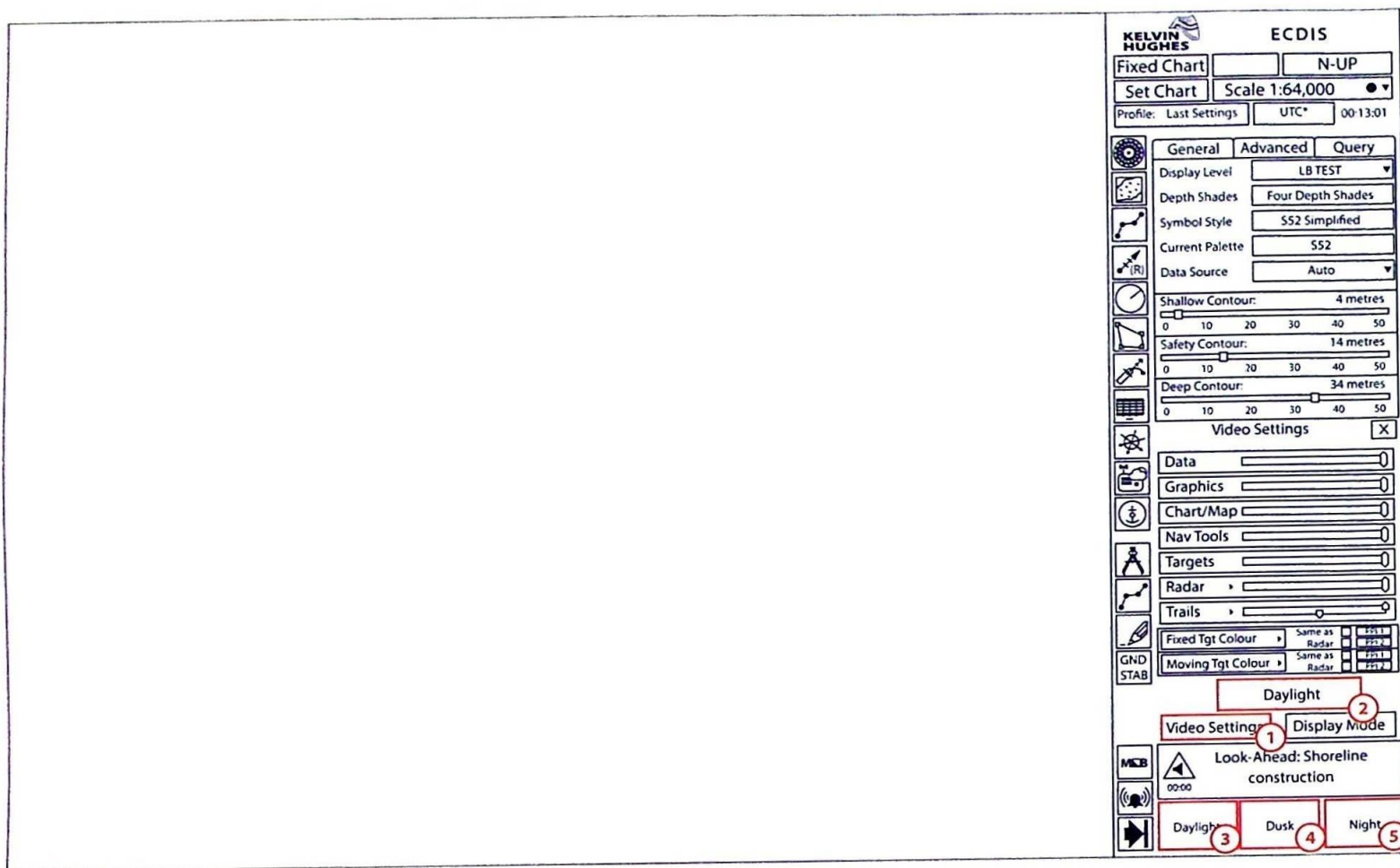


- ① Chart display panel
- ② Chart display settings
- ③ Cursor cue

- ④ Chart panel toolbar
- ⑤ Alarms/warnings box
- ⑥ Lower control panel

- ⑦ Upper control panel

1.2 Colour Palette



- 1 Click 'Video Settings'.
- 2 Hover over the palette selection button.
- 3 Left click to select the 'Daylight' colour palette.
- 4 Middle click to select the 'Dusk' colour palette.
- 5 Right click to select the 'Night' colour palette.

1.3 Range/Scale/Motion



1 Hover over the 'Fixed Chart' button.

2 Left click to select 'RM Best Scale'.

3 Middle click to select 'TM Best Scale'.

4 Right click to select 'Fixed Chart Mode'.

5 Left click on the chart scale dropdown.

6 Manually select a scale from the list of scales.

1.4 Setting CCRP

Radar Set-Up Utility

Analog / Manual	Interfaces	Radar Sensors	Ownship 3	Firmware	Backup & Restore	Network	Track Control
-----------------	------------	---------------	---	----------	------------------	---------	---------------

Length: metres Beam: metres Bow to CCRP: metres Centre to CCRP (to Port is +ve): metres Propulsion Type:

Minimum Speed: kn Maximum Speed: kn Maximum ROT: 1/min Maximum Roll: ° Maximum Pitch: °

Rudder 1: Rudder 2: Stern Depth: Stern Thruster 1: Stern Thruster 2: Roll: Bow Thruster 1: Bow Thruster 2: Bow Thruster 3: Pitch:

CCRP + SENSORS

Vessel Name: Call Sign: MMSI: Trial Manoeuvre Defaults: Acc./Dec.:

Radar Antenna Offsets

GPS Antenna Offsets

SENSORS metres from bow metres from centre

Position Monitoring Thresholds

Economy: metres Medium: metres Precise: metres

Video Settings

Display Mode 1

Set-Up Mode 2

Have Keyboard

Capture Screen

Save Settings

Close

Note to user: To find CCRP settings, you must exit 'ECDIS Mode' and enter 'Set-Up Mode'.

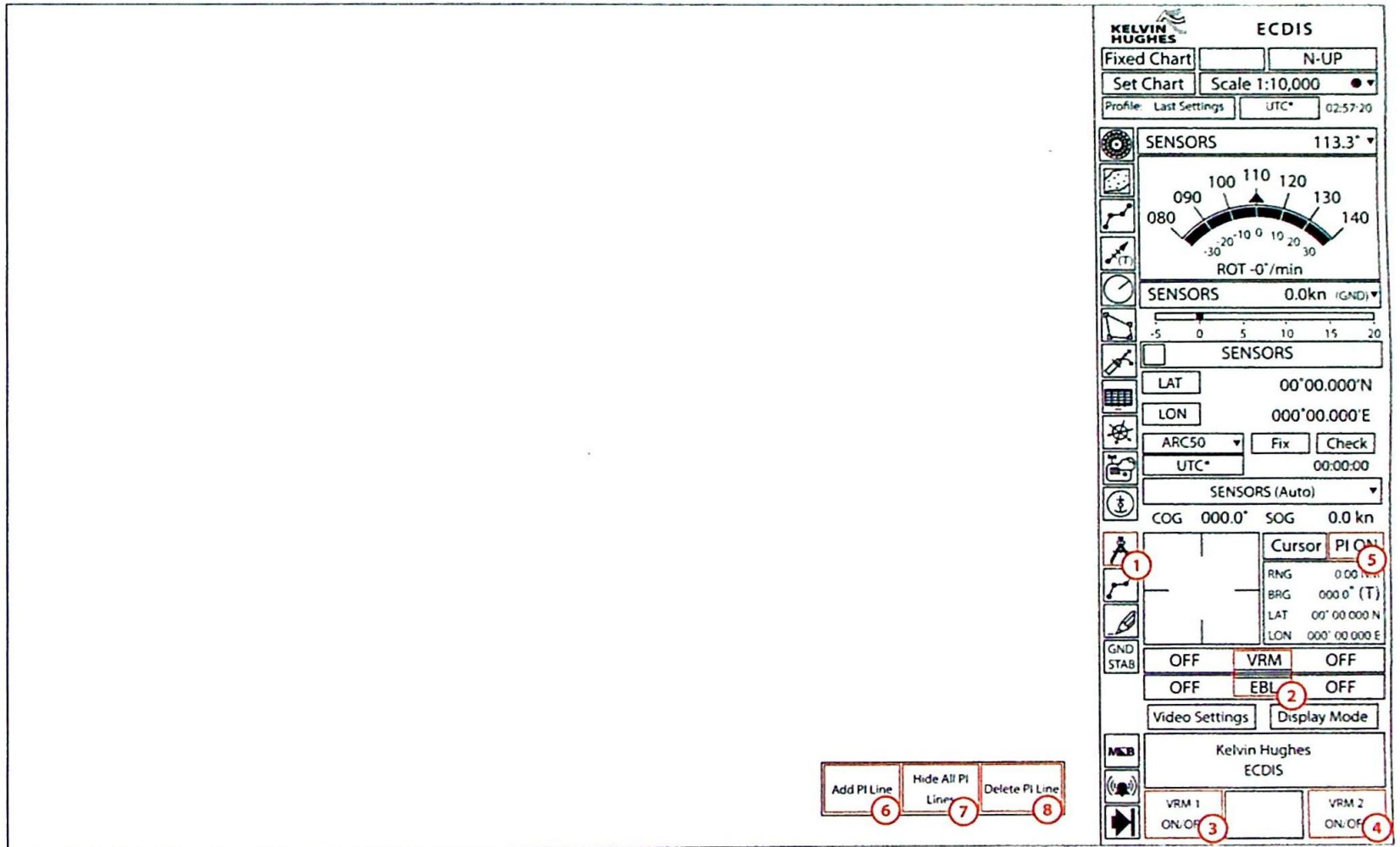
1 Click 'Display Mode' – this button can be found just above your alarms while in ECDIS mode.

3 Click 'Ownship' to open CCRP settings.

2 From the mode selection page, click 'Set-Up Mode'.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



1 Click this button.

2 Hover over 'VRM' or 'EBL'

3 Left click to turn ON/OFF VRM 1/EBL 1.

4 Right click to turn ON/OFF VRM 2/EBL 2.

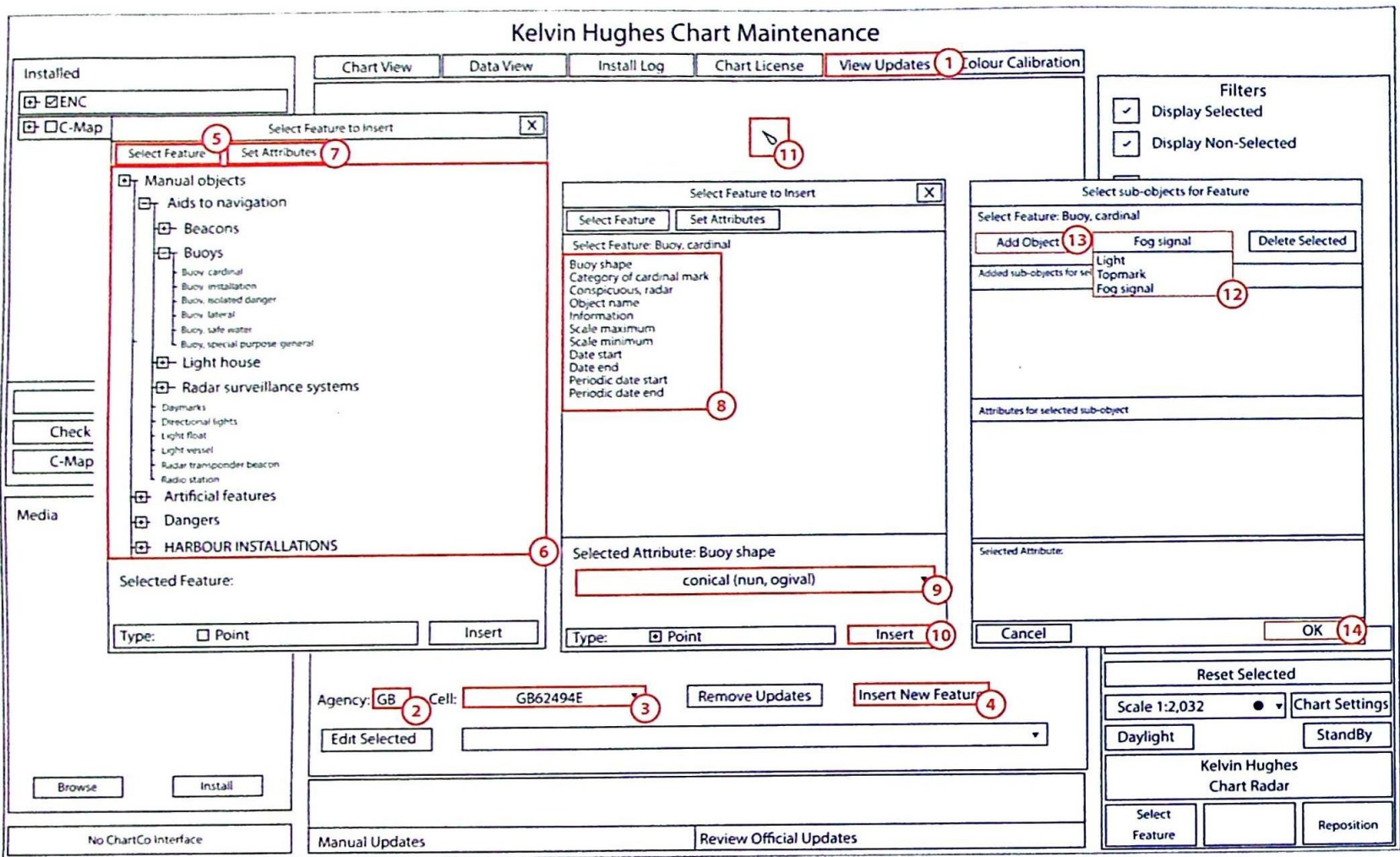
5 Hover over 'PI ON'.

6 Left click to 'Add PI Line' (max 4).

7 Middle click to 'Hide All PI Lines'.

8 Right click to 'Delete PI Line'.

2.2 Manual Corrections



Note to user: To add manual updates, you are required to exit your ECDIS and move to the 'StandBy' screen. You should then enter 'Chart Maintenance' mode.

- 1 Click 'View Updates'.
- 2 Select the required agency.
- 3 Select the required cell.
- 4 Click 'Insert New Feature'.
- 5 Ensure 'Select Feature' is selected.
- 6 Select an object from the list available.
- 7 Ensure 'Set Attributes' is selected.
- 8 Left click to select an attribute to edit.
- 9 Use the dropdown to change the attribute value.
- 10 Click 'Insert'.
- 11 Left click on the chart in the position to place your object.
- 12 Select a sub-object from the dropdown.
- 13 Click 'Add Object' to include it in your manual update.
- 14 Click 'OK' to finish.

2.4 No Go Areas/User Charts

The screenshot shows the Kelvin Hughes ECDIS interface. The 'Select Edit Action' menu is open, listing various drawing tools. The 'Dangerous' checkbox is checked. The main control panel on the right shows 'Loaded Maps', 'Selected Map', and various settings like 'Cursor', 'PI ON', 'VRM', and 'EBL'. Red circles with numbers 1 through 6 highlight specific steps in the process.

1 Click the maps button.

3 Select an object from the list.

5 Set the danger ON/OFF.

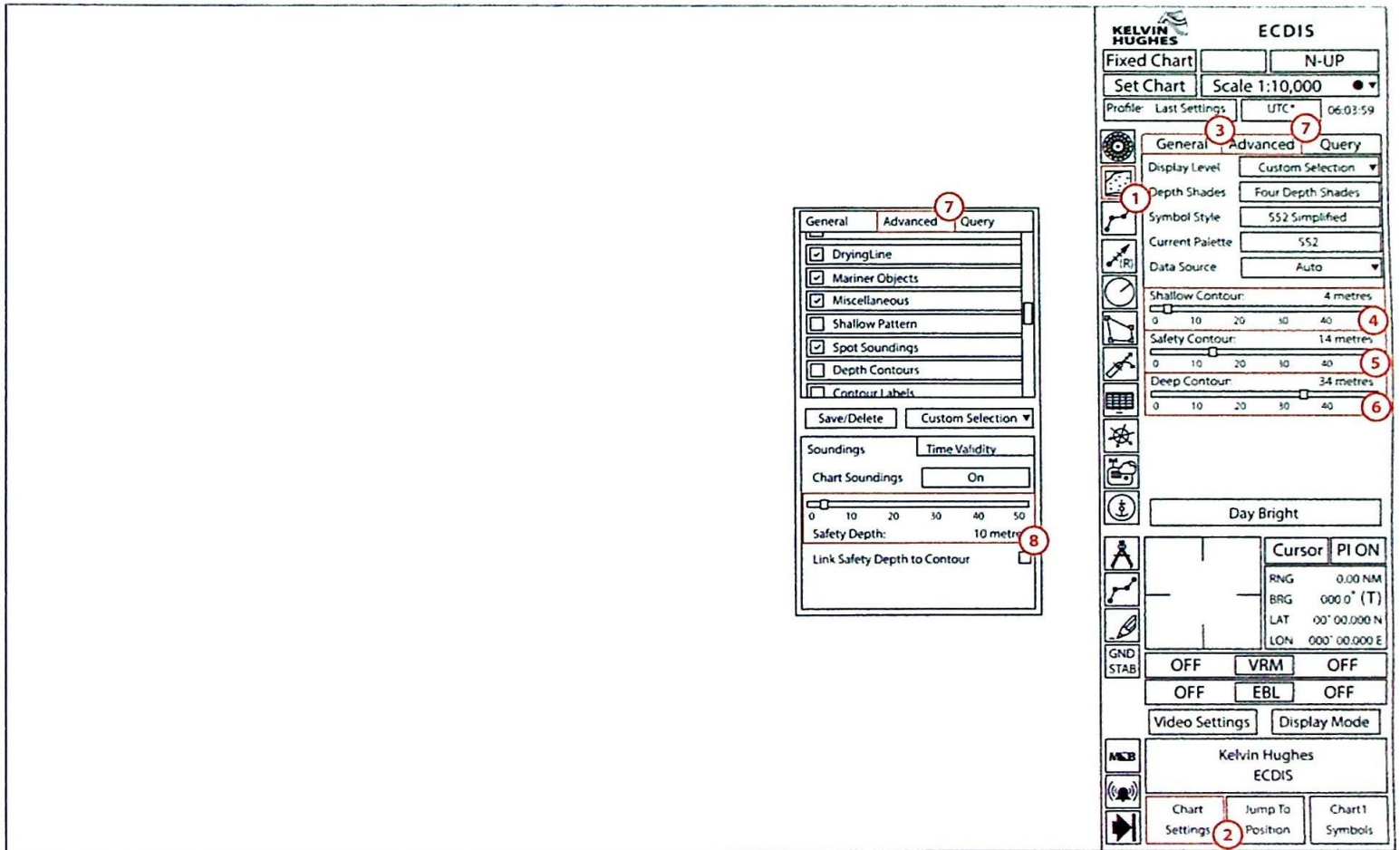
2 Click 'Edit Selected Map'.

4 Set the object colour.

6 Click 'End Edit'.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour



1 Hover over the chart settings button.

2 Left click to open 'Chart Settings'.

3 Ensure 'General' is selected.

4 Adjust 'Shallow Contour', as required.

5 Adjust 'Safety Contour', as required.

6 Adjust 'Deep Contour', as required.

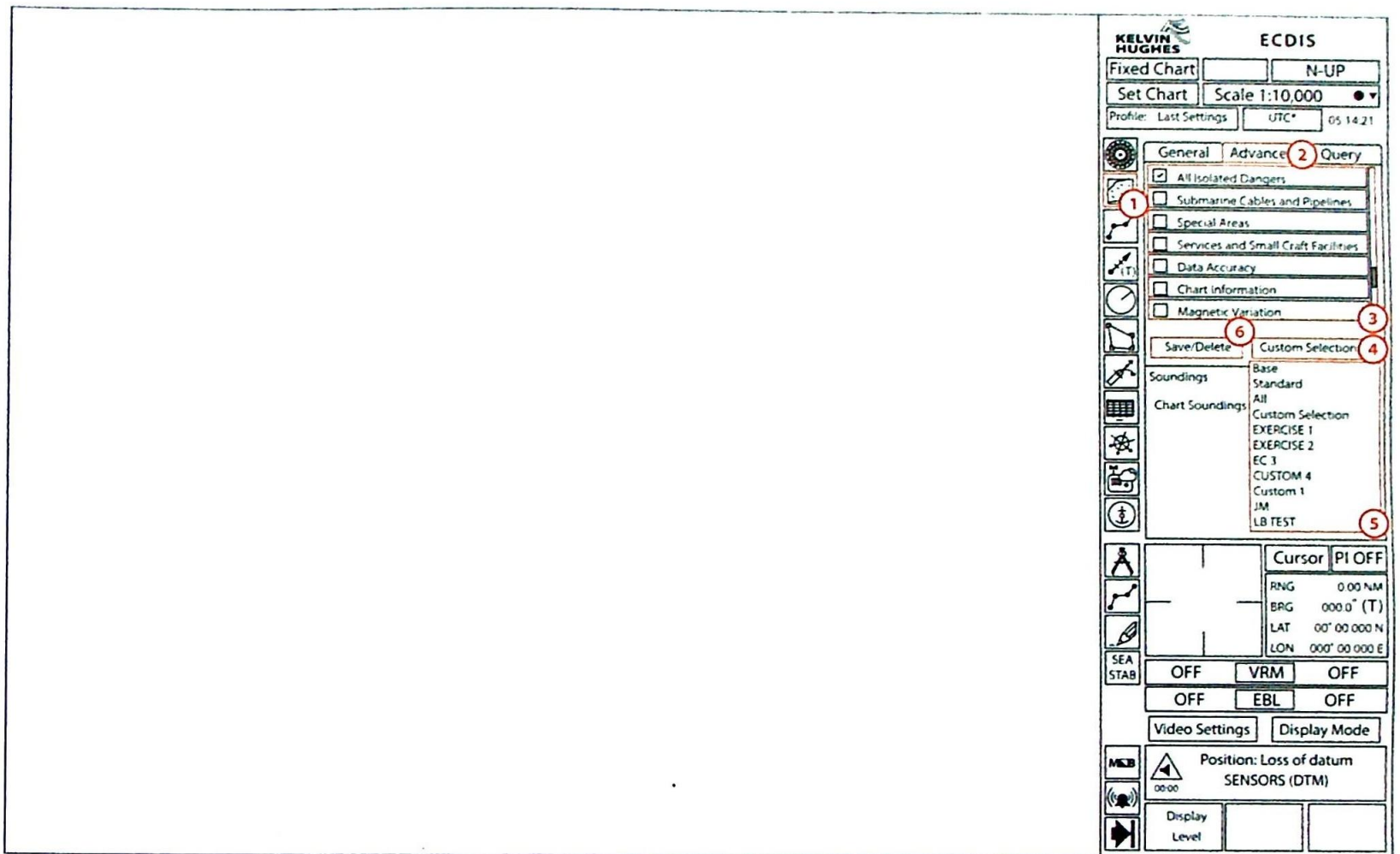
7 Select 'Advanced'.

8 Adjust 'Safety Depth', as required.

3.2 Display Preference/Chart 1

- 1 Hover over the chart settings button.
- 2 Left click to open 'Chart Settings'.
- 3 Ensure 'General' is selected.
- 4 Change 'Display Level', as required.
- 5 Change 'Depth Shades', as required.
- 6 Change 'Symbol Style', as required.
- 7 Change 'Current Palette', as required.
- 8 Hover over the chart settings button again.
- 9 Right click to open 'Chart 1 Symbols'.
- 10 Click 'ECDIS Symbols' to open the index.
- 11 Select an area from the list to show more.
- 12 Click the 'X' to close 'Chart 1'.

3.3 Display Configuration



1 Left click on the chart settings button.

2 Ensure 'Advanced' is selected.

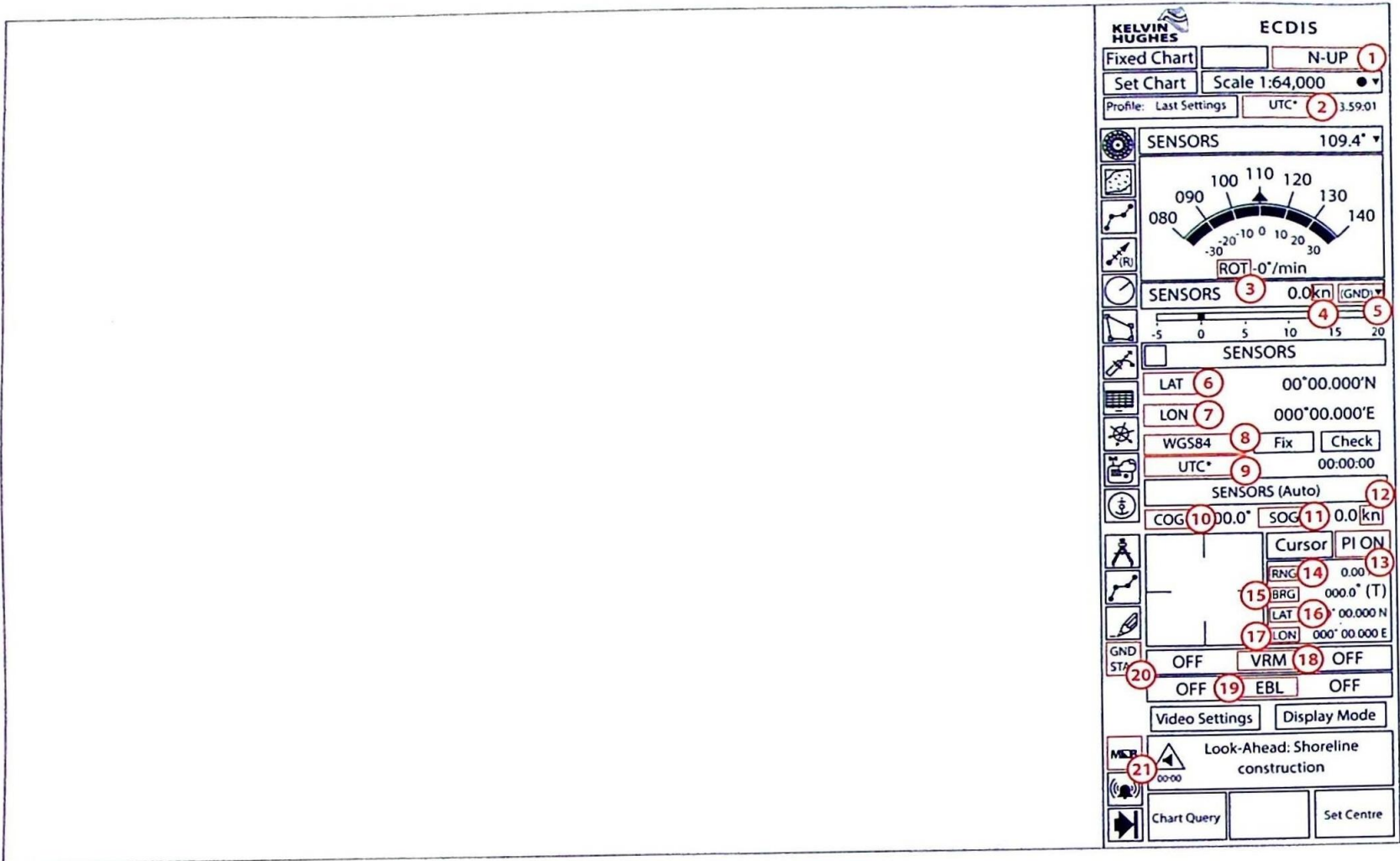
3 Turn ON/OFF layers from the list, as required.

4 Click 'Custom Selection' to show the dropdown.

5 Select a custom set-up from the list.

6 Click 'Save/Delete' to save current settings.

3.4 Abbreviations



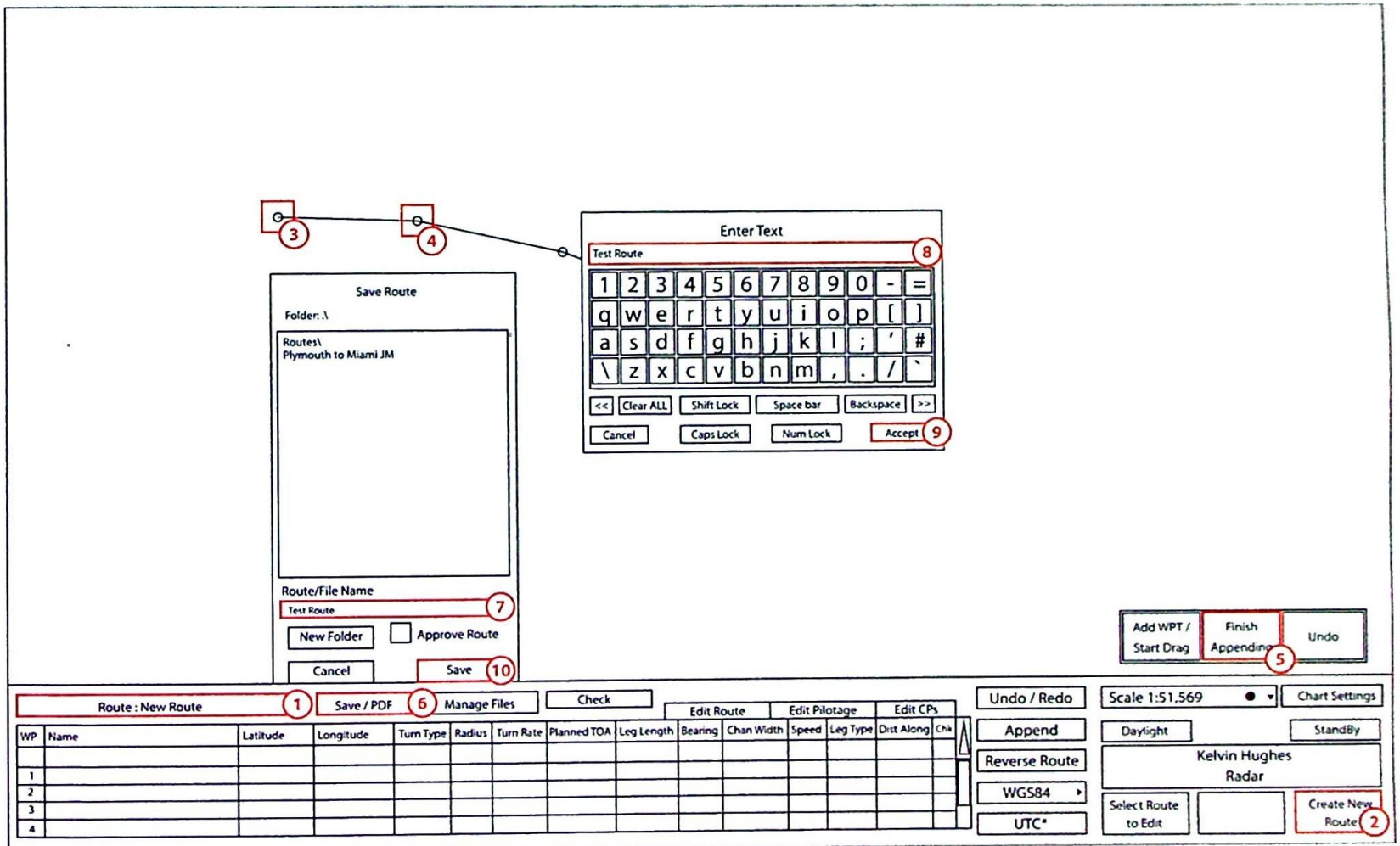
- 1 North Up
- 2 Universal Time Coordinated
- 3 Rate of Turn
- 4 Knots
- 5 Ground
- 6 Latitude
- 7 Longitude

- 8 World Geodetic System 1984
- 9 Universal Time Coordinated
- 10 Course Over Ground
- 11 Speed Over Ground
- 12 Knots
- 13 Parallel Index
- 14 Range

- 15 Bearing
- 16 Latitude
- 17 Longitude
- 18 Variable Range Marker
- 19 Electronic Bearing Line
- 20 Ground Stabilised
- 21 Man Over Board

Section 4: Route Planning

4.1 Creation



Note to user: To create a route, you are required to exit your ECDIS and move to the 'StandBy' screen. You should then enter the 'Route Planning' mode.

- 1 Hover over 'Route: New Route'.
- 2 Right click to 'Create New Route'.
- 3 Left click on the chart to place your first waypoint.
- 4 Consecutive left clicks will place more waypoints.
- 5 Middle click 'Finish Appending' when you have finished adding waypoints.
- 6 Click 'Save/PDF'.
- 7 Click the text box.
- 8 Name your route.
- 9 Click 'Accept' to save the name.
- 10 Click 'Save' to finish.

4.2 Route Checking

Configure Parameters and Initiate Route Checking

Objects in Full Check

- Anchor berth
- Anchorage area
- Beacon, cardinal
- Beacon, isolated danger
- Beacon, lateral
- Beacon, safe water
- Beacon, special purpose/general
- Bridge
- Buoy, cardinal
- Buoy, installation
- Buoy, isolated danger
- Buoy, lateral
- Buoy, safe water
- Buoy, special purpose
- Cable area
- Cable, overhead
- Cable, submarine
- Canal
- Cargo transshipment area
- Causeway
- Caution area
- Conveyor

Objects in Safety Check

- Bridge
- Cable, overhead
- Conveyor
- Depth area
- Dredged area
- Ice area
- Land area
- Light float
- Marine farm/culture
- Obstruction
- Offshore platform
- Pipeline, overhead
- Pontoon
- Sounding
- Territorial Sea Area to be avoided
- Underwater/awash rock
- Unsurveyed area
- User defined areas to be avoided
- Wreck

Safety Contour: 14 metres
 Safety Depth: 10 metres
 Safety Height: 28 metres
 Link Safety Depth & Contour:

Safety Check Full Check

Route: New Route Save / PDF Manage Files **1** Check **9** Edit Route Edit Pilotage Edit CPs Undo / Redo Scale 1:51,569 Chart Settings

WP	Name	Latitude	Longitude	Turn Type	Radius	Turn Rate	Planned TOA	Leg Length	Bearing	Chan Width	Speed	Leg Type	Dist Along	Chk
1														
2														
3														
4														

Append Reverse Route WGS84 UTC* Daylight StandBy Kelvin Hughes Radar Safety Check Accept/Clear Result Configure Check **10** **2**

Note to user: To check a route, you are required to exit your ECDIS and move to the 'StandBy' screen. You should then enter the 'Route Planning' mode.

- 1** Ensure you have a route loaded and hover over 'Check'.
- 2** Right click to 'Configure Check'.
- 3** Left click on individual check objects to highlight them.
- 4** Click 'Add to Safety Checks' when you have selected your required objects.

- 5** Added objects will appear in the 'Objects in Safety Check' list.
- 6** Click 'Safety Check' to check the object in the 'Safety Check' list.
- 7** Click 'Full Check' to check all the objects in the 'Full Check' list.

- 8** Check 'Enable changes' to be able to add to the User Chart.
- 9** Hover over the 'Check' button again.
- 10** Middle click to accept the 'Safety Check'.

4.3 Optimisation/Schedule

WP	Name	Latitude	Longitude	Turn Type	Radius	Turn Rate	Planned TOA	Leg Length	Bearing	Chan Width	Speed	Leg Type	Dist Along	Chk
1														
2														
3														
4														

Route: New Route Save / PDF Manage Files Check Edit Route Edit Pilotage Edit CPs Undo / Redo Scale 1:51,569 Chart Settings

Append Daylight StandBy

Reverse Route Kelvin Hughes Radar

WGS84

UTC* Change Chart Settings

Note to user: To optimise a route, you are required to exit your ECDIS and move to the 'StandBy' screen. You should then enter the 'Route Planning' mode.

- 1 Ensure you have a route loaded with some waypoints.
- 2 Optimise your route by configuring the ETA for each leg, as required.
- 3 Alternatively, you can optimise your route by configuring the speed of each leg, which will automatically calculate the ETA for each leg.
- 4 Ensure your channel width (XTD) is set up adequately for each leg.
- 5 Select rhumb line or Great Circle as required for each leg.

4.4 Selecting Active Route

The screenshot displays the ECDIS interface with a 'Select Route To Load' dialog box open. The dialog box shows a list of routes under the folder 'Routes\'. The route 'Plymouth to Miami JM' is selected and highlighted. Below the list, the 'Route Name' field contains '\Plymouth to Miami JM' and '0 days since approval'. There are 'Cancel' and 'Load' buttons at the bottom of the dialog box. The ECDIS main panel on the right shows various settings and buttons. The 'Route: Not Loaded' button is highlighted. The 'Next Orders' section shows 'Next WPT', 'Turn Radius', 'Leg Bearing', 'Leg Length', 'Leg Duration', 'Distance to WOP', and 'Time to WOP'. The 'Open Route Monitoring Dialog' section shows a cursor position table with fields for RNG, BRG, LAT, and LON. The 'SEA STAB' section shows 'OFF', 'VRM', and 'OFF' buttons. The 'Look-Ahead: Shoreline construction' section shows '00:00'. The 'Select Main Route', 'Route Settings', and 'Deselect Route' buttons are also visible.

- 1 Click the routes button.
- 2 Hover over the 'Route: Not Loaded' button.
- 3 Left click to 'Select Main Route'.
- 4 Select your route from the list.
- 5 Click 'Load'.
- 6 Hover over the 'Route: Not Loaded' button again.
- 7 Right click to deselect your route.

Section 5: Route Monitoring

5.1 Look-Ahead

The screenshot displays the ECDIS interface with the 'Configure Parameters and Initiate Route Checking' dialog box open. The dialog box is divided into two main sections: 'Objects in Full Check' and 'Objects in Safety Check'. The 'Objects in Full Check' list includes items like Anchor berth, Anchorage area, Beacon, cardinal, etc. The 'Objects in Safety Check' list includes Bridge, Cable, overhead, Conveyor, etc. There are buttons for 'Add to Safety Check', 'Remove from Safety Check', and 'Reset Safety Checks'. Below the lists are input fields for 'Safety Contour' (14 metres), 'Safety Depth' (10 metres), 'Safety Height' (28 metres), and a checkbox for 'Link Safety Depth & Contour'. A 'Full Check' button is at the bottom right of the dialog.

The 'Ownship' settings panel on the right shows the 'Look Ahead' tab selected. It includes a 'Look Ahead' button (1), a 'Look Ahead ENABLED' indicator (4), a 'Look Ahead Zone Display OFF' indicator (5), a 'Look Ahead' distance of 2 mins (6), and a 'Clearance' of 0.10 NM (7). A 'Configure Check' button (8) is also present. At the bottom, there are 'Ownship Settings' (2), 'Anchor Watch', and 'Max EOTs' buttons.

1 Hover over the 'Ownship' button.

2 Left click to open 'Ownship Settings'.

3 Select the 'Look-Ahead' tab.

4 Ensure 'Look-Ahead' is enabled.

5 Enable/disable the 'Look-Ahead Zone'.

6 Set 'Look-Ahead' distance.

7 Set clearance for around your vessel.

8 Click 'Configure Check'.

9 Highlight objects in the list by left clicking on them.

10 Click 'Add to Safety Checks' to add the selected objects to your check.

11 Added objects will appear in the 'Safety Check' list.

12 Click 'Remove from Safety Checks' to remove selected objects from the 'Safety Check' list.

5.2 TT/AIS/Vectors

1 Left click on the targets button.

4 Vector adjustment settings to be adjusted, as required.

7 Adjust the 'OwnShip' vector length, as required.

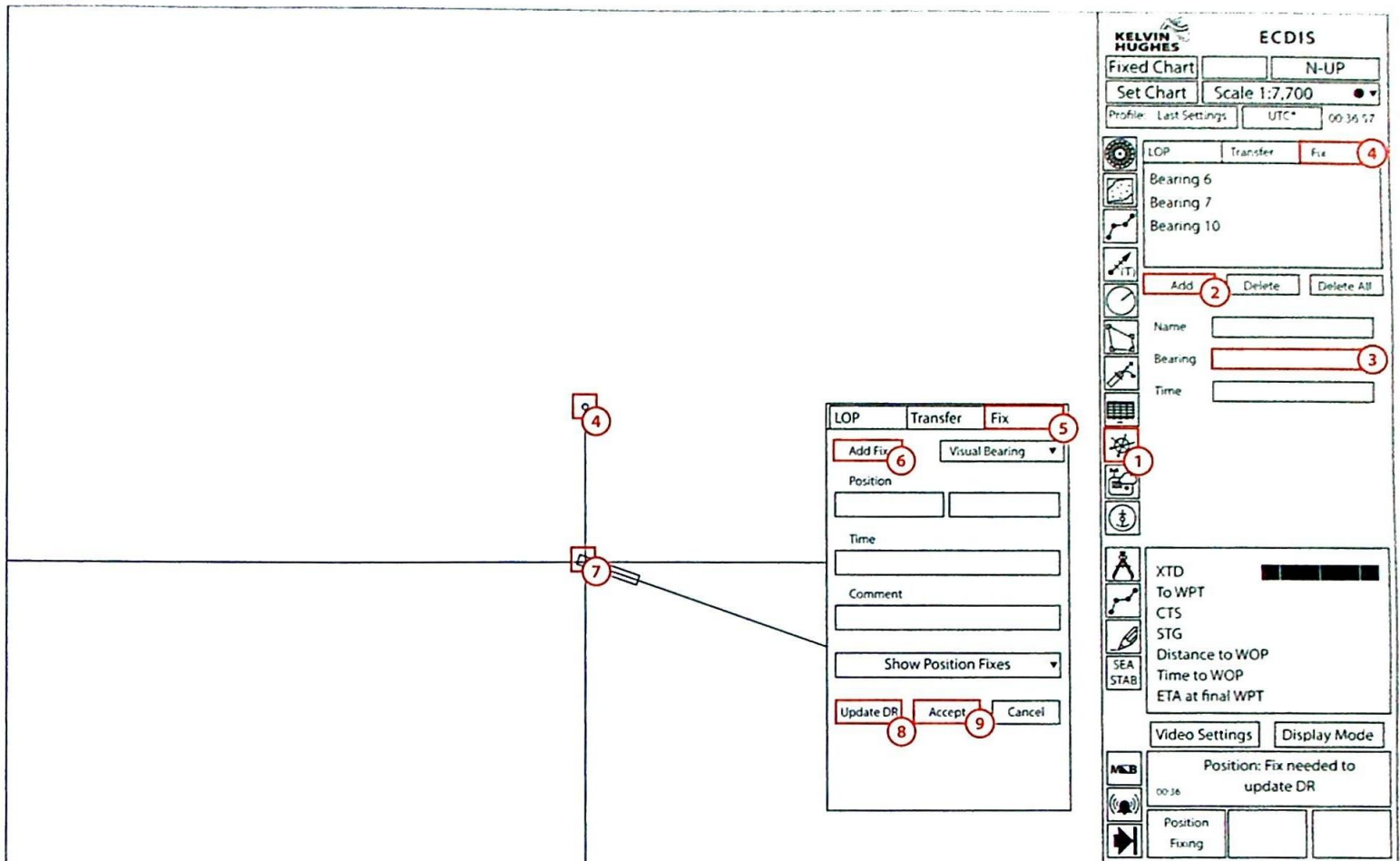
2 Information list of selected targets.

5 Left click on the chart set-up button.

3 TT/AIS target settings.

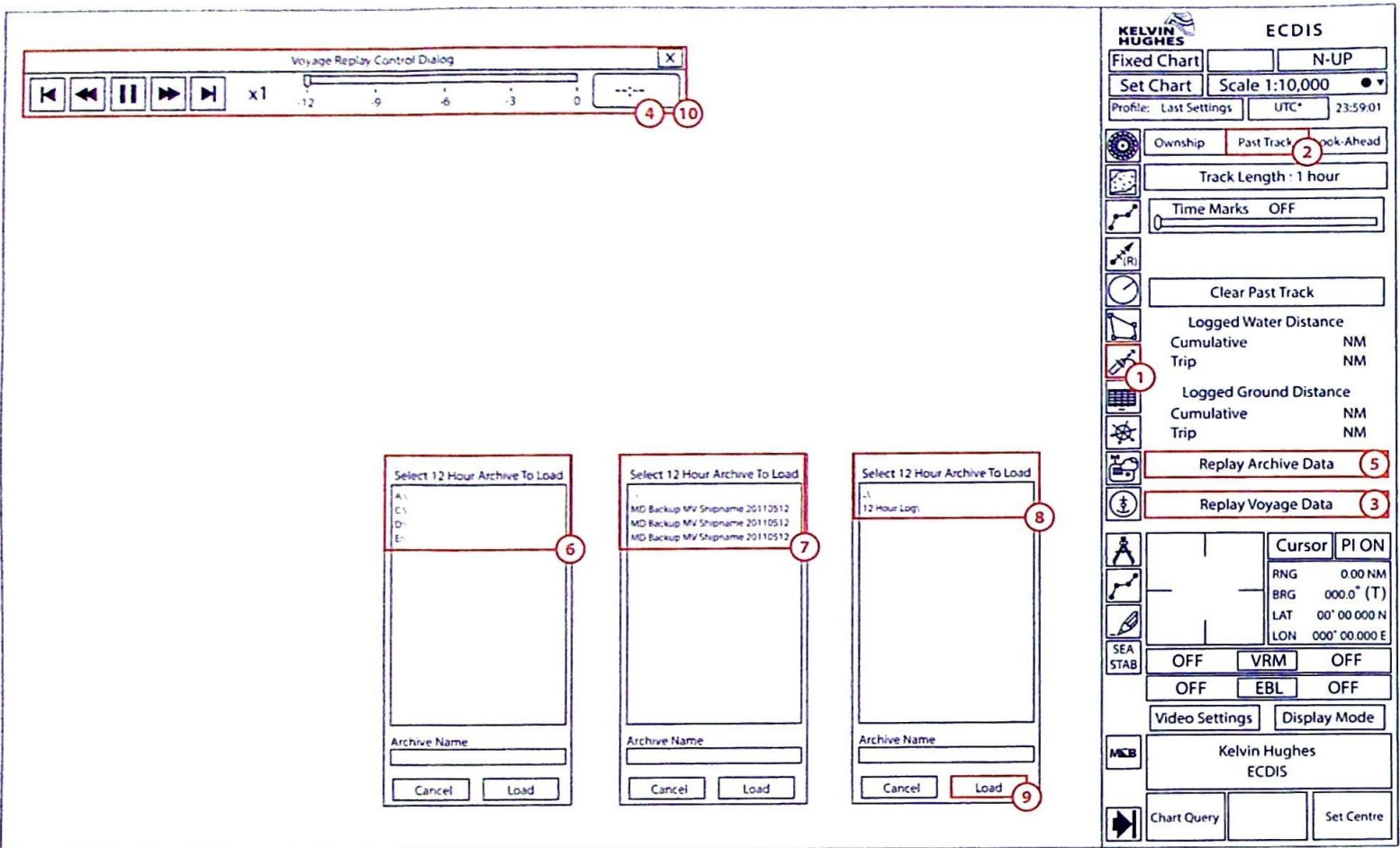
6 Select the 'OwnShip' tab.

5.3 Position Fixing



- 1 Click the fixing button.
- 2 Click 'Add'.
- 3 Type in the actual bearing of your reference object.
- 4 Left click on your reference object on the chart.
 - a Repeat steps 2 to 4 as many times as required.
- 5 Click 'Fix'.
- 6 Click 'Add Fix'.
- 7 Left click to place your fix in the estimated position.
- 8 Click 'Update DR' to update the DR position.
- 9 Click 'Accept' to log the fix position.

5.4 Playback



1 Click the 'Ownship' button.

2 Select the 'Past Track' tab.

3 Click 'Replay Voyage Data' to replay the last 12 hours of your voyage.

4 Use the 'Voyage Replay Control Dialog' to control the replay.

5 Click 'Replay Archive Data' to manually select a past 12 hour period.

6 Select the drive to which your data is saved.

7 Select the time period of your replay.

8 Select your replay file.

9 Click 'Load'.

10 Use the 'Voyage Data Control Dialog' to control the replay.

Section 6: System Settings

6.1 Warning/Alarm Configuration

The screenshot shows the 'Configure Parameters and Initiate Route Checking' dialog box with two columns: 'Objects in Full Check' and 'Objects in Safety Check'. The 'Objects in Safety Check' column is highlighted in red. The 'Ownship' panel shows the 'Look Ahead' tab selected, with 'Look Ahead ENABLED' and 'Look Ahead Zone Display OFF'.

- 1 Hover over the 'Ownship' button.
- 2 Left click to open 'Ownship Settings'.
- 3 Select the 'Look-Ahead' tab.
- 4 Click 'Configure Check'.
- 5 Left click objects in the 'Full Check' list to highlight them.
- 6 Click 'Add to Safety Checks'.
- 7 Highlighted objects will now be displayed in the 'Safety Check' list.
- 8 Press 'X' to finish configuring.

6.2 Position/Heading/Speed

The screenshot shows the Kelvin Hughes ECDIS interface. On the left, there are three dropdown menus: 'Manual Gyro' (set to 110.0°), 'Manual Speed' (set to 0.0kn (MAN)), and 'DR Position'. On the right, the main display area shows a heading scale (080 to 140) with a needle pointing to 110.0°, a speed scale (0 to 20 kn) with a needle pointing to 0.0kn, and various readouts including LAT (00°00.000'N), LON (000°00.000'E), COG (000.0°), SOG (0.0 kn), and sensor data (GGA, GLL). The interface also includes buttons for 'Navigation', 'Manual Gyro', 'Manual Speed', 'DR Position', 'ARC50', 'VRM', 'EBL', 'Video Settings', 'Display Mode', 'Chart Query', and 'Set Centre'. Red callout boxes with numbers 1 through 7 are overlaid on the interface to indicate the steps for setting heading, speed, and position.

1 Left click on the 'Navigation' button.

2 Click the 'Manual Gyro' dropdown.

3 Select input from the list available.

4 Click the 'Manual Speed' dropdown.

5 Select input from the list available.

6 Click the 'DR Position' dropdown.

7 Select input from the list available.

6.3 Emergency Menus

The screenshot shows the Kelvin Hughes ECDIS interface. On the right, the 'Target' table displays MOB information:

Target Name	MOB	MOB
Source	MOB	MOB
RNG	0.06 NM	0.36 NM
BRG	257.4°	275.5°
T.CTW	061.9'	344.6'
T.STW	0.1 km	0.5 km
PA	0.00 NM	0.12 NM
T.CPA	00.00 20	00.01 53
BCR	4.01 NM	2.78 NM
BCT	00 23 16	00 17 51

Below the table are various settings: CPA Limit 3.0 NM, AIS ON, T.CPA Limit 5 min, Tgt Assoc. ON, Guard Zone, Tgt Tote OFF, Target Settings, Trial Manoeuvre, Vector Length 4 min (R), Past Positions 5.6 min (R), Cursor PI ON, and various display options like VRM, EBL, and Video Settings.

The 'SENSORS' menu on the left shows 'DR Position' selected. The 'Fix' tab is active, and the 'Add Fix' button is highlighted. The 'Update DR' button is also highlighted.

1 Left click 'MOB' to drop an MOB position.

2 Left click on the targets button.

3 Left click on the MOB marker on your chart.

4 MOB information will be displayed as a target.

5 Left click on the sensors button.

6 Click the position dropdown.

7 Select 'DR Position'.

8 Left click on the manual fixing button.

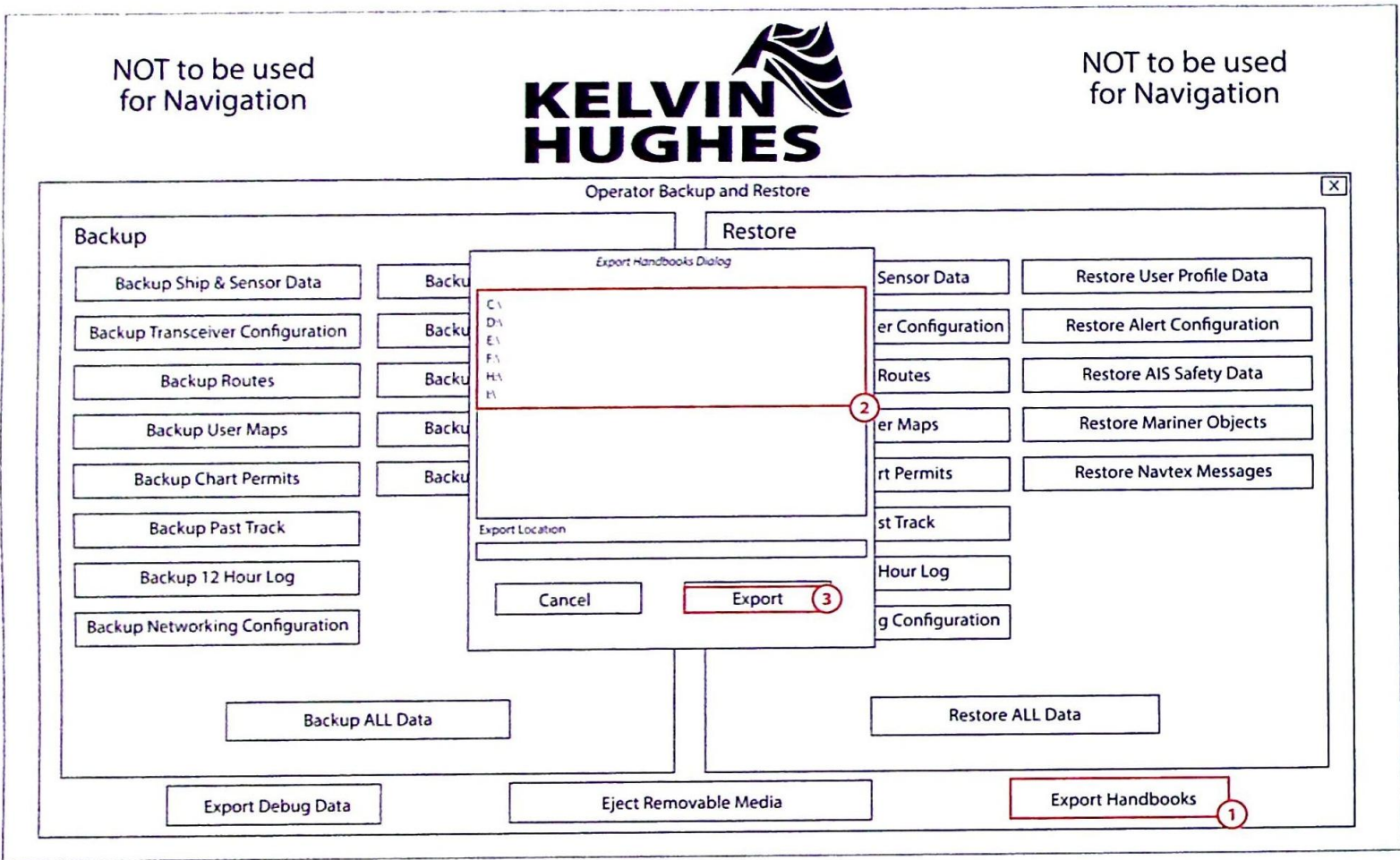
9 Select the 'Fix' tab.

10 Click 'Add Fix'.

11 Left click on the chart in the position of the fix.

12 Click 'Update DR' to confirm the position.

6.4 Manual



Note to user: To view the user manual, you are required to exit your ECDIS and move to the 'StandBy' screen. You should then enter the 'Backup/Restore' mode.

- 1 Click 'Export Handbooks'.
- 2 Select the file location.
- 3 Click 'Export' to export the manual to the chosen file location.

9. Kongsberg – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Main Chart Panel		
	Range Panel		Menu Area
	Top Bar		
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Tools		
	Marker Position		Distance Measure
	Marker Range and Bearing		Trip Meter
	EBL/VRM		Stopwatch
	EBL/VRM (Advanced)		Time/Distance/Speed Calculator
	Curved EBL		Target Interception
	Parallel Index Lines		Find Place Name
	Position Line		On-Screen Keyboard
	Position Fix		Targets
	Datum conversion		AIS
	Marker Position in Other Datum		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Charts		Menu Area
	Charts Types		Themes
	Legend		Options
	Safety Depth Settings		Non-Chart
	Manage Charts		AIO
	Manage Notes		Object Information
	Options		Browse Position and Date
	Databases		Spot Soundings (ON/OFF)
	Safety Contour		Accuracy (ON/OFF)
	Show coverage of licensed charts		Scale min (ON/OFF)
			Vessels/Targets (ON/OFF)
			Past Track (ON/OFF)
			Admiralty Information Overlay (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Route		
	Manage Route		Auto Pilot Mode
	List Waypoints		Auto Pilot Panel
	Validate Route		Compute ETA
	Backup/Restore Routes		Speed Pilot
	Set Route Parameters		Search and Rescue
	Monitor Route		Groundings

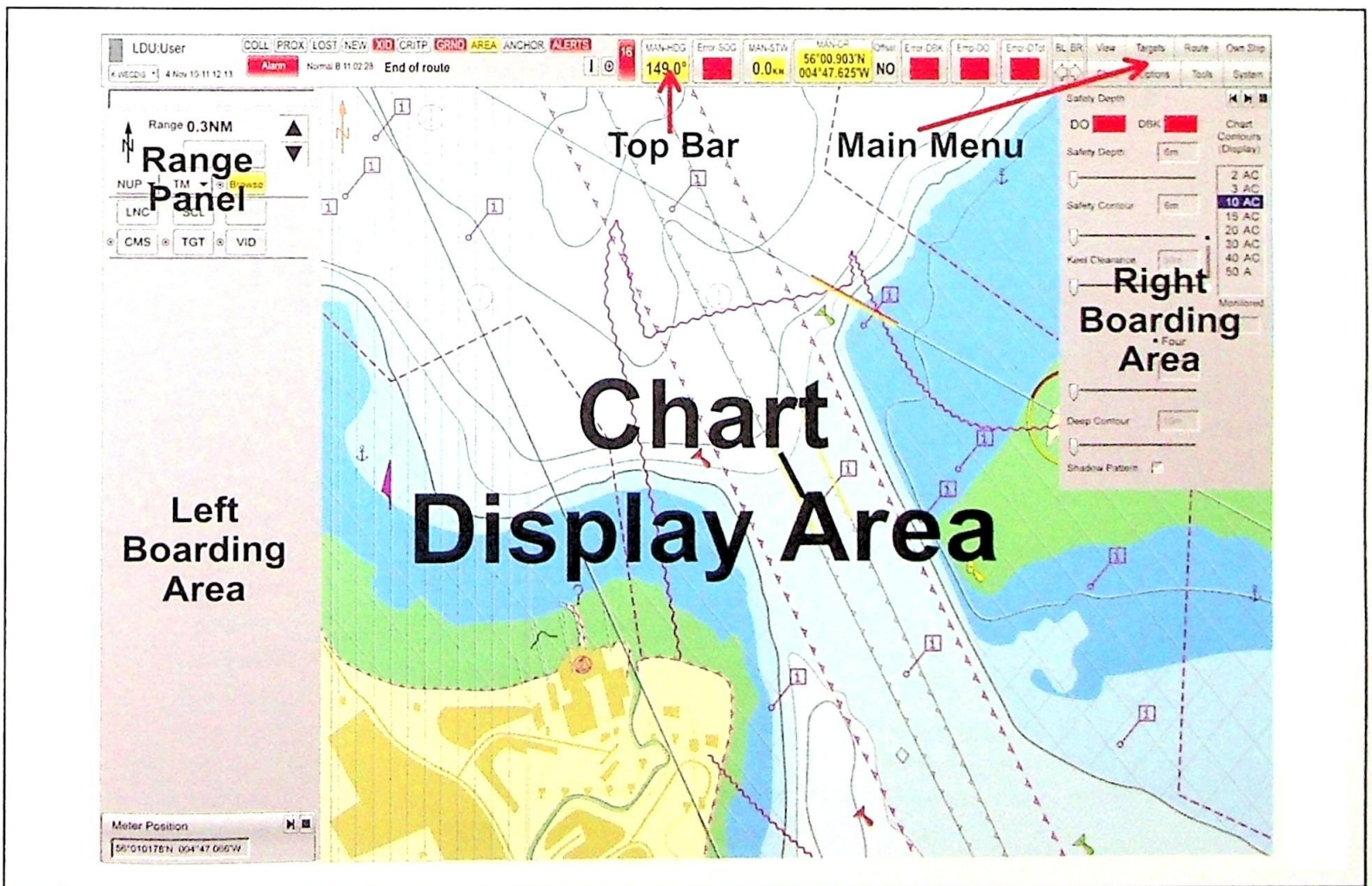
Kongsberg – Familiarisation Checklist (Page 2 of 2)

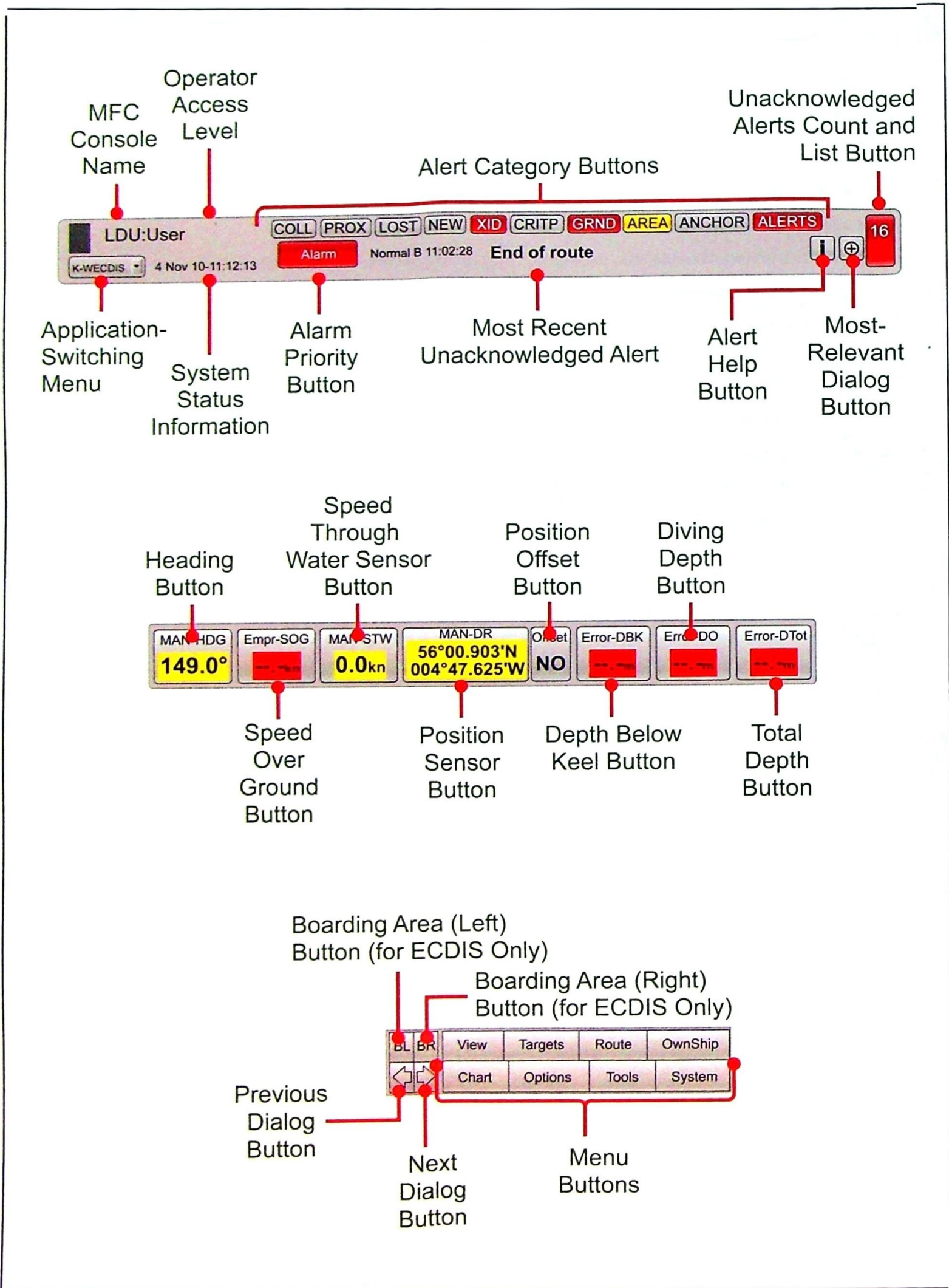
6.	Route Monitoring	Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
Monitoring			
	Anti Grounding		Logging
	Manoeuvre		
	Enable all area alerts (ON/OFF)		
7.	Chart Updating	The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.	
Manage Charts			
	General		List
	Install		Settings
	Updates		
8.	System Sensors	Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.	
Sensors			
	Position		Wind
	Speed		Depth
	Heading		
9.	System Alerts	Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.	
Alarms		Monitoring	
	Alarm Setup		Anti Grounding
	Area – Visual and Audible/Visual and Beep/Visual		
Top Bar			
	Alert Area		
	Caution area (ON/OFF)		
10.	System Units	Become familiar with the system's logbook, records, data storage and configuration set up.	
System			
	Date and Time		LAN Communication
	Parameter Settings		Serial Communication
	Preset Parameters		Sensor Configuration
	Print Screen		Auto Pilot Configuration
	Printer		Integration Configuration
	Password		Route Export Configuration
	Maintenance	Own Ship	
	Shutdown		Data
	About K-ECDIS		Position Offset
	Alarm Setup		Ship Parameters
11.	ECDIS Operator's Manual	Locate the system's operator's user guide for referencing and help.	
Hard copy of Operator's Manual only available			

Kongsberg

Key Kongsberg ECDIS Menu Functions

1.	Confirmation of Ship's Length, Beam, Maximum Draught and ROT	Own Ship>Ship Parameters
2.	View list of installed Charts	Chart>Manage Charts>Settings>Coverage
3.	View the latest update number installed	Chart>Legend
4.	View information on charted objects and view additional text	View>Object Information
5.	Set the Safety Depth and Safety Contour	Chart>Safety Depth Setting
6.	Set the Shallow and Deep Contour	Chart>Safety Depth Setting
7.	Input Chart Notes	Chart>Manage Notes
8.	Turn the ship outline on	System>Parameter Settings>Display
9.	Configure the Anti-grounding Cone	Own Ship>Anti-grounding
10.	Configure Velocity Vectors	System>Parameter Settings>Display
11.	Configure Ship's Track	System>Parameter Settings>Track
12.	Manually change WPT information of an Active Route	Route>Monitor Route
13.	View past Alarms and Warnings	Alarms Panel
14.	Input a Visual or Radar Fix	Tools>Position Line Tools>Position Fix





10. OSI ECPINS/ECPINS Warship/ECPINS Submarine – Familiarisation Checklist (Page 1 of 3)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display Become familiar with the basic chart functionality from the main display.	
	Main Menu	Chart Display Menu
	Screen Layout	Features
	Colour Scheme	+ Zoom In
	Chart Selection	– Zoom Out
	Chart Corrections	Chart Display Range
	Radar Maps	Chart Display Scale
	Navigation Tools	Chart Mode
	Contacts	Chart Orientation
	Routes	Chart Projection
	Markers	
	Setup	
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Nav Tools	
	EBL/VRM 1	Calculator
	EBL/VRM 2	Locate
	EBL/VRM 3	Fixing
	Hazard 1	Set and Drift
	Hazard 2	Force Protection
	Query Chart Features	Zone Alarms
	Display Chart Info at Location	Tides and Currents
	Clearing Lines	Logbook
	Ghost Ship	
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Features	Chart Corrections
	Overlays	Manual Corrections
	Viewing Groups	Quick Corrections
	Text Groups	Copy Chart Corrections to Disk
	IHO Scale Filter (ON/OFF)	
	Accuracy (ON/OFF)	
	Admiralty Data Assessment Layer (ON/OFF)	
	Chart Selection	Copy Chart Corrections from Disk
	Load Charts	Print Chart Corrections Report
	Chart 1	Update Charts
	Change Chart Order	Review Chart Updates
	Remove Charts	Setup
	Auto Chart Loading Setup	Display Setup
	Auto Chart Loading	Filter Object by Scale (ON/OFF)
	Chart Install	Show Shallow Water Pattern (ON/OFF)
	Licences	
	View S-63 permits...	
	Display Chart Information Panel	
	Display Chart Notes	

OSI ECPINS/ECPINS Warship/ECPINS Submarine – Familiarisation Checklist (Page 2 of 3)

	Display General T and P Notice to Mariners		
	Enter Manual Datum Shift for Chart		
	Print Chart Summary Report		
	Brightness Check		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Routes		
	Select Route to Display		Set Route Direction
	Remove Route		Route Calculator
	Select Active Route		SAR Patterns
	Create Route		Lock/Unlock Route
	Edit Route		Save or Delete Route
	Subdivide Leg...		
	Scan Route		Markers
	Display Route Monitor		Markers
	Action Points		Setup
	Add Arrival Alert		Route Display Options
	ETA/TTG Speed		XTD Corridor (ON/OFF)
	Print Route Report		Wheel Over Lines (ON/OFF)
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.		
	Chart Display Menu		Main Menu
	Features		Screen Layout
	+ Zoom In		Colour Scheme
	– Zoom Out		Navigation Tools
	Chart Display Range		Contacts
	Chart Display Scale		
	Chart Mode		
	Chart Orientation		
	Chart Projection		
7.	Chart Updating The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.		
	Chart Selection		
	Chart Install		Licenses
	Install Charts		ARCS/AusRNC
	Uninstall charts		S57
			C-map

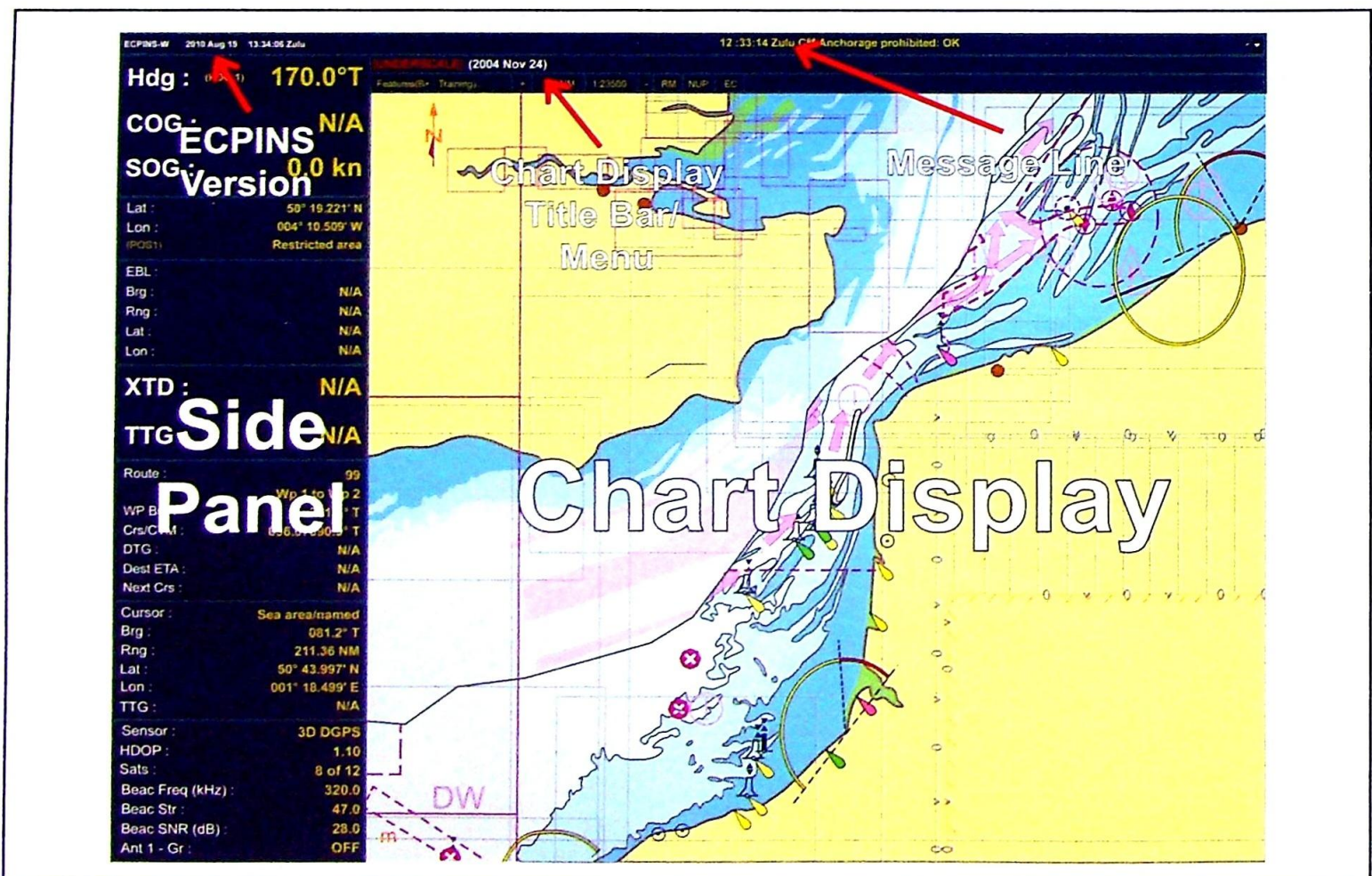
OSI ECPINS/ECPINS Warship/ECPINS Submarine – Familiarisation Checklist (Page 3 of 3)

8.	System Sensors	
	Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.	
	Sensor Setup	
	Select Primary Position Source	DGPS Beacon
	Select Secondary Position Source	AIS Setup
	Display Position Source	Select ARPA Screen Index
	Select Sensor Source	Contacts
	Enable Sensor Sources	Contacts
	Position Discrepancy Monitor	AIS Filtering
	Heading Discrepancy Monitor	ARPA Filtering
	Set Devise Errors	Target Limits
	Set Gyro Error	Set CPA/TCPA Alarm Limits
	Set Depth Transducer Offset	Contact Association
	Wind Vector	AIS Messaging
	Set Anemometer Offset	AIS Manual Activation
9.	System Alerts	
	Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.	
	Screen Layout	
	Alerts	Navigation Tools
		Zone Alarms
10.	System Units	
	Become familiar with the system's logbook, records, data storage and configuration set up.	
	Setup/Display Setup	
	Sound	Set True Motion Paging
Set Resource Monitoring	Export ARPA Map To Disk	
Alert Set-Test	Vessel Setup	
System Self-Test	Position Adjustment	
Display System Settings	Voyage Data Recording	
System Setup Summary	Screen Captures	
Display Shortcuts	Voyage Plans	
Select System Units	Software Licences	
Select Time Zone	Security	
11.	ECDIS Operator's Manual	
	Locate the system's operator's user guide for referencing and help.	
	Setup	
	Help	About

OSI ECPINS/ECPINS Warship/ECPINS Submarine

Key OSI ECPINS/ECPINS Warship/ECPINS Submarine ECDIS Menu Functions

1.	View list of installed Charts	Main Menu>Chart Selection>Load Chart
2.	View the latest update number installed	Main Menu>Chart Selection>Display Chart Information Panel
3.	Change Chart Settings	Chart Display Title Bar/Menu>Feature Settings
4.	View information on charted objects and view additional text	Main Menu>Navigation Tools>Query Chart Features...
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Main Menu>Setup>Vessel Setup>Set Safety Depth
6.	Input an Event Marker	Main Menu>Markers>Create Marker...
7.	Input a Manual Update	Main Menu>Chart Corrections>Manual Corrections
8.	Turn the Ghost Ship on	Main Menu>Navigation Tools>Ghost Ship
9.	Configure the Guard Frame (Anti-grounding Cone)	Main Menu>Setup>Vessel Setup>Set Anti-grounding
10.	Configure Ship's Track	Main Menu>Setup>Display Setup>Vessel Track
11.	Configure Velocity Vectors	Main Menu>Setup>Display Setup>Velocity Vectors...
12.	View past Alarms and Warnings	Click Message Line
13.	Input a Visual or Radar Fix	Main Menu>Navigation Tools>Fixing>Create Operator Fix
14.	Turn on Radar Image Overlay	Main Menu>Setup>Radar>Radar Image
15.	Take a Screenshot	Main Menu>Setup>Screen Captures>Create Screen Capture



Hdg : <small>(HDG 1)</small>	342.0°T
COG :	342.0°T
SOG :	12.0 kn
Lat :	48° 31.582' N
Lon :	123° 11.698' W
<small>(POS1)</small>	200.0 - 300.0 m
EBL :	Range and Bearing 1
Brg :	080.3° T
Rng :	1.31 NM
Lat :	40° 31.802' N
Lon :	123° 09.754' W
XTD : S	26 m
TTG :	00:16:07
Route :	Boundary Pass - Beaumont Shoal to Haro
WP Brg :	341.3° T
Crs/CTM :	341.5/340.8° T
DTG :	3.23 NM
Dest ETA :	Mar 25 23:39
Next Crs :	349.4° T
Cursor :	200.0 - 300.0 m
Brg :	018.7° T
Rng :	1.59 NM
Lat :	48° 33.082' N
Lon :	123° 10.932' W
TTG :	00:07:55
Sensor :	3D DGPS
HDOP :	1.10
Sats :	5 of 12
Beac Freq (kHz) :	320.0
Beac Str :	47.0
Beac SNR (dB) :	28.0
Ant 1 - Gr :	OFF

← Heading, COG and SOG

← Latitude and Longitude (Position)

← EBL

← XTD (Cross Track Distance)

← Route Data

← Cursor Data

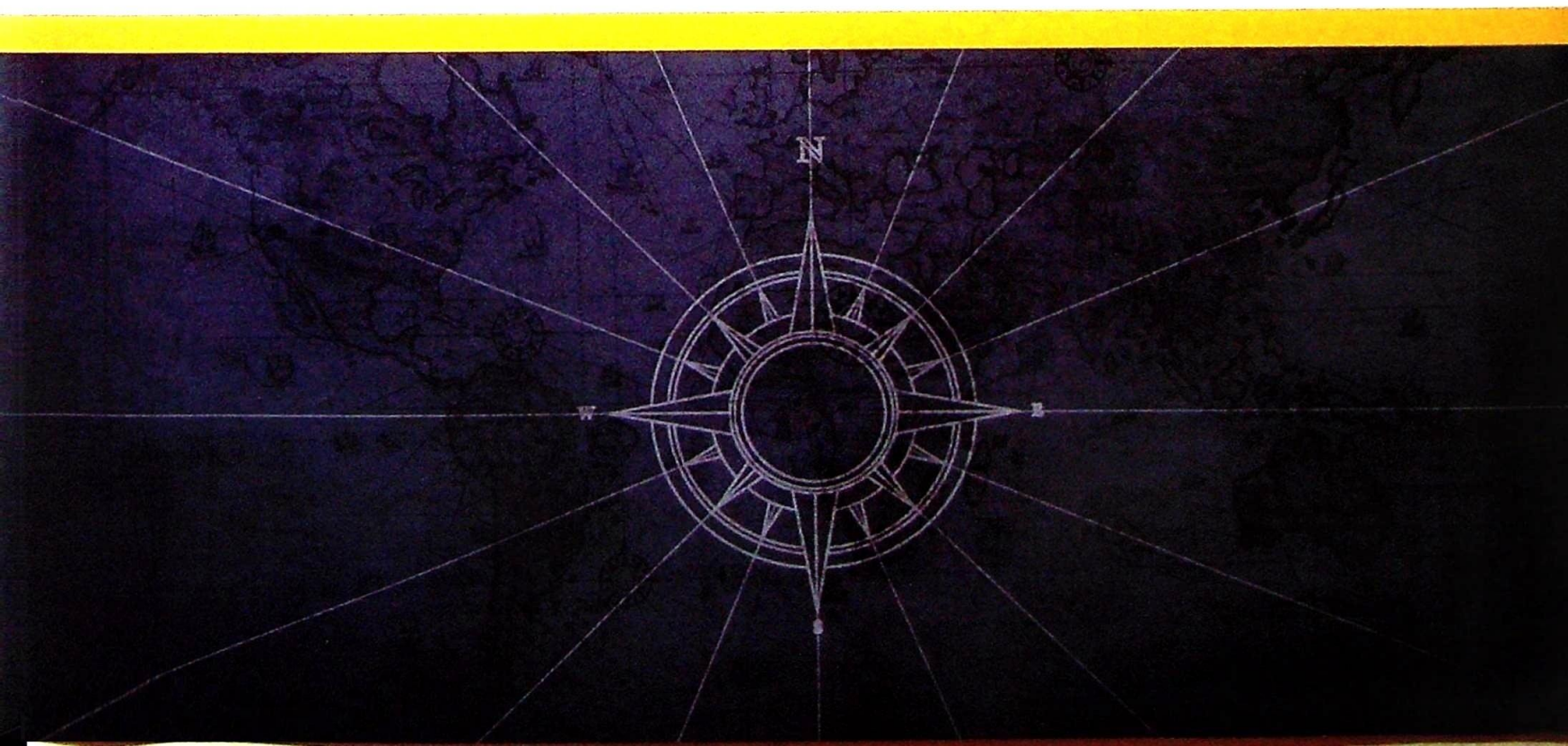
← Sensor Data

A	B	C
[UNDERSCALE] (2004 Nov 26) CA470075 - CHS 3440 - Race - Race Rocks to/à D'Arcy Island		
D	E	F
Features(B+ - Training)... + 1.5 NM 1:23500 - RM NUP EC		
G	H	I
J	K	

- A – Warnings, Status Messages and Current Tasks
- B – Chart Production Date or Date of Most Recent Update
- C – Displayed Chart Title
- D – Features
- E – Zoom In
- F – Chart Display Range
- G – Chart Display Scale
- H – Zoom Out
- I – Centring Mode
- J – Chart Orientation
- K – Chart Projection

ECPINS/ECPINS Warship/ECPINS Submarine

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Section 1: Main Display

1.1 Screen Layout

The screenshot shows the ECDIS main display interface. It features a top status bar (1) with ECPINS version and date/time, a message line (2) for system messages, and a chart display title bar (3) with a menu (4). The left side contains navigation text boxes (5) for vessel data and sensor information. The main area (6) is a large empty space for the chart display.

ECPINS 2000 Jan 01 12:00:00 Bravo		19:01:53 Bravo Low Disk Space: Remaining disk space: 9.8% (23.5 GB)	
Hdg: (HDG1) 203.2°T		[UNDERSCALE] (14 Nov 2018) US5NY1DM - NOAA 12335 - Hudson and East Rivers Governors Island to 67th Street	
COG: (POS1) N/A		Features(S)... + - 0.50 NM 1:10600 RM 205°T EC	
SOG: (POS1) 0.0 kn			
Lat:	40° 41.518' N		
Lon:	074° 01.959' W		
(POS1)	9.1-36.5 m		
EBL:			
Brg:	N/A		
Rng:	N/A		
Lat:	N/A		
Lon:	N/A		
XTD:	N/A		
TTG:	N/A		
Route:	N/A		
WP Brg:	N/A		
Crs/CTM:	N/A		
DTG:	N/A		
Dest ETA:	N/A		
Next Crs:	N/A		
Cursor:	9.1-36.5 m		
Brg:	094.9°T		
Rng:	0.352 NM		
Lat:	40° 41.518' N		
Lon:	074° 01.959' W		
TTG:	N/A		
Sensor:	GPS		
HDOP:	N/A		
Sats:	N/A		
Beac Freq (kHz):	N/A		
Beac Str:	N/A		
Beac SNR (dB):	N/A		
Anti-Gr:	Foreshore		

1 ECPINS version and date/time

3 Chart display title bar

5 Navigation text boxes

2 Message line

4 Chart display menu

6 Chart display

1.2 Colour Palette/Profiles

The screenshot shows the ECDIS software interface with several dialog boxes open. The main menu is visible, and the 'Colour Scheme' dialog is selected. The 'Set Control Settings' dialog is also open, showing a list of profiles. The 'Add Control Settings' dialog is open, showing a text input field for a profile name. The 'Colour Scheme' dialog shows a list of color schemes and a preview window. The 'Set Control Settings' dialog shows a list of profiles and buttons for 'Add', 'Remove', 'Display', 'Load', 'Save', and 'Exit'. The 'Add Control Settings' dialog shows a text input field for a profile name and buttons for 'Save' and 'Cancel'.

1 Show main menu and select 'Setup'.

2 Select 'Security'.

3 Open 'Set Control Settings...'.

4 Click 'Add'.

5 Enter a 'Profile Name'.

6 Click 'Save'.

7 Double click on your profile to select it.

a Note: '<','>' will be displayed on selected profile.

8 Click 'Save' to update current settings to selected profile.

1 Show main menu and select 'Colour Scheme...'.

2 Select a colour scheme from the list.

3 Click 'OK' to apply the colour scheme.

1.3 Range/Scale/Motion

The screenshot displays the ECDIS interface with the following elements:

- Data Panel (Left):**
 - Hdg: (HDG1) 203.2°T
 - COG: (POS1) N/A
 - SOG: (POS1) 0.0 kn
 - Lat: 40° 41' 518" N
 - Lon: 074° 01' 959" W
 - EBL: 9.1-36.5 m
 - Brig: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: 9.1-36.5 m
 - Brig: 094.9°T
 - Rng: 0.352 NM
 - Lat: 40° 41' 488" N
 - Lon: 074° 01' 498" W
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Foreshore
- Main Display Area:**
 - Features(S)... + - 0.50 NM 1-10600 RM 205°T EC
 - Range dropdown menu (0.05 NM to 2072.00 NM)
 - Motion dropdown menu (RM, TM, FP, CC)
 - Orientation dropdown menu (North Up, Route Up, Head Up, Manual)
- Legend (Right):**
 - RM (Relative Motion)
 - TM (True Motion)
 - FP (Fixed Position)
 - FP (Fixed Position - recall)
 - CC (Chart Centered - topmost)
 - CC (Chart Centered - selected)

- 1 Click on range.
- 2 Range dropdown list is shown.
- 3 Click on scale.
- 4 Scale dropdown list is shown.
- 5 Click on motion.
- 6 Motion dropdown list is shown.
- 7 Click on orientation.
- 8 Orientation dropdown list is shown.

1.4 Setting CCRP Part 1

The screenshot displays the ECDIS software interface. On the left, a data panel shows vessel information: HDG: 203.2°T, COG: N/A, SOG: 0.0 kn, and various position and sensor data. The main display area is divided into three columns of menu options: Main Menu, Setup, and Security. The Security menu is expanded, showing options like Login, Logout, Change Password, etc. Two dialog boxes are overlaid on the right: 'Login' and 'Verify Password', both with 'Administrator' as the user ID and a masked password. Numbered callouts (1-10) indicate the sequence of steps for setting up CCRP.

Note to user: To complete the following steps, 'Setup' mode and Administrator login are required.

- 1 Show main menu and select 'Setup'.
- 2 Select 'Security'.
- 3 Select 'Login...'.
- 4 Enter 'User ID' for Administrator.
- 5 Enter password for Administrator.
- 6 Click 'OK'.
- 7 Select 'Vessel Setup'.
- 8 Open 'Vessel Shape Editor'.
- 9 Verify Administrator password.
- 10 Click 'OK'.

1.4 Setting CCRP Part 2

The screenshot displays the ECPINS interface with the following elements:

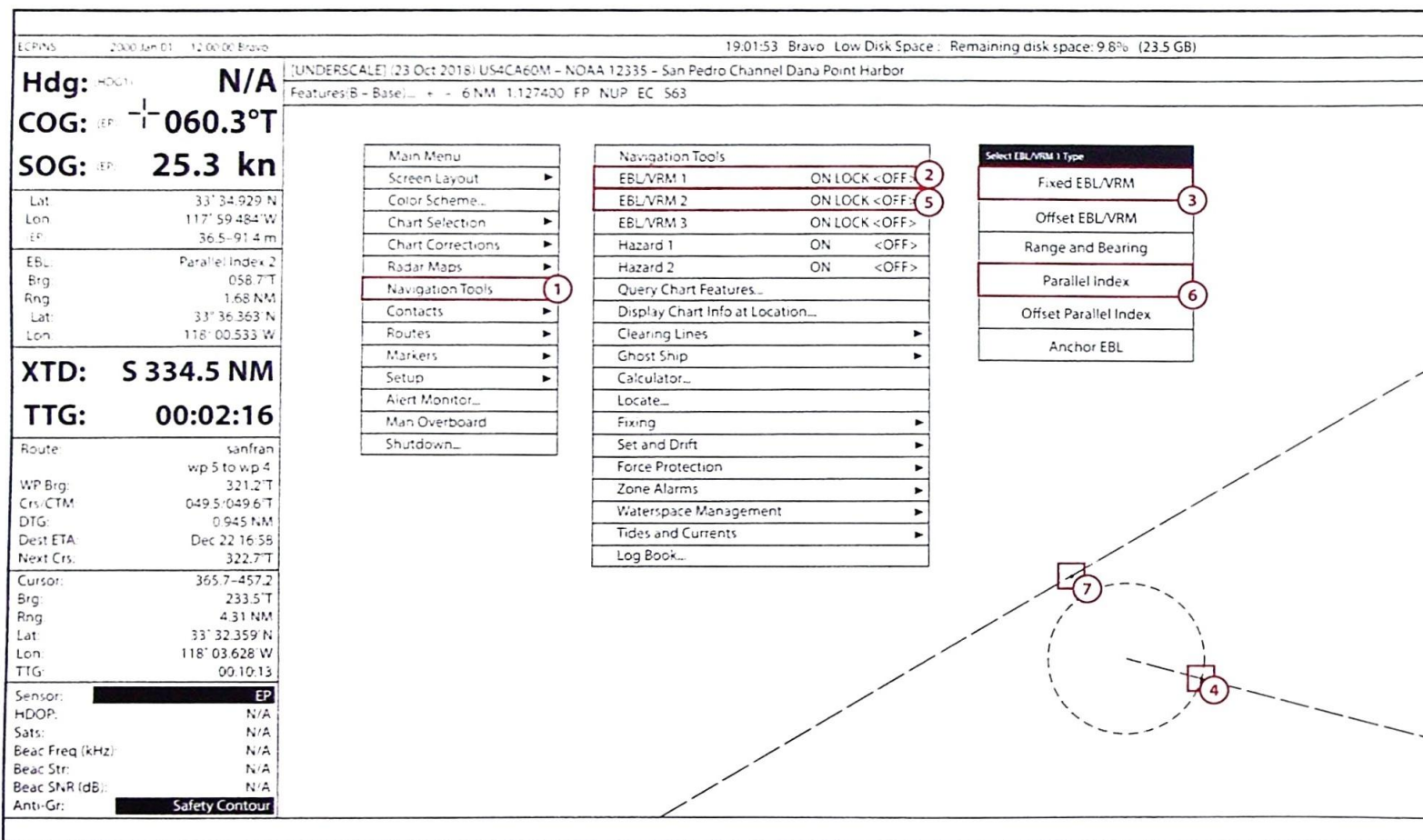
- Header:** ECPINS, 2009 Jan 01 12:00:00 Bravo, 19:01:53 Bravo Low Disk Space: Remaining disk space 9.8% (23.5 GB)
- Navigation Data:**
 - Hdg: (HDG1) 203.2°T
 - COG: (POS1) N/A
 - SOG: (POS1) 0.0 kn
 - Lat: 40° 41.518' N
 - Lon: 074° 01.959' W
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: 9.1-36.5 m
 - Brg: 094.9°T
 - Rng: 0.352 NM
 - Lat: 40° 41.518' N
 - Lon: 074° 01.959' W
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Foreshore
- Map Area:** [UNDERSCALE] (14 Nov 2018) US5NY1DM - NOAA 12335 - Hudson and East Rivers Governors Island to 67th Street. Features(S)... + - 0.50 NM 1.10600 RM 205°T EC.
- Menu:** VSE Offshore Surveyor (NAV)
 - Vessel (1)
 - Shape
 - Units
 - Zoom
 - New
 - Open... (2)
 - Delete
 - Import...
 - Export
 - Edit...
 - Turn Data...
 - Save
 - Save As...
 - Exit
- Open Dialog:**
 - ACT
 - Offshore Surveyor
 - Offshore Surveyor (NAV) (3)
 - OK (4)
 - Cancel
- Vessel Diagram:** A diagram of a vessel hull with various antennas and sensors. Callouts include:
 - 17 m - Bow
 - GPS Antenna
 - Radar Antenna 4
 - Radar Antenna 3
 - Radar Antenna 1
 - 3 m
 - 0
 - 3 m

Note to user: To complete the following steps, 'Setup' mode and Administrator login are required.

- 1 Click 'Vessel'.
- 2 Select 'Open...'
- 3 Select your vessel from the list.
- 4 Click 'OK' to review CCRP offsets.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



1 Middle click on the chart and select 'Navigation Tools'.

2 Left click on 'EBL/VRM 1'.

3 Select 'Fixed EBL/VRM'.

4 Left click on the location you would like to place the EBL/VRM.

5 Left click on 'EBL/VRM 2'.

6 Select 'Parallel Index'.

7 Left click to select the range; left click to select bearing; right click to finish.

2.2 Manual Corrections

The screenshot displays the ECDIS software interface. At the top, the status bar shows 'ECPINS 2000 Jan 01 12:00:00 Bravo' and '00:55:51 Bravo Low Disk Space Remaining disk space: 97% (23.2 GB)'. The main display area shows a chart with a correction set. The left sidebar contains a 'Main Menu' with options like 'Screen Layout', 'Color Scheme', 'Chart Selection', 'Chart Corrections', 'Radar Maps', 'Navigation Tools', 'Contacts', 'Routes', 'Markers', 'Setup', 'Alert Monitor', 'Man Overboard', and 'Shutdown...'. The 'Chart Corrections' menu is open, showing options like 'Manual Corrections...', 'Quick Corrections...', 'Copy Chart Corrections to Disk...', 'Copy Chart Corrections from Disk...', 'Print Chart Corrections Report...', 'Update Charts', and 'Review Chart Updates...'. The 'Manual Corrections' window is open, showing a 'Correction Set' named 'Set 1'. The 'New Correction Sets' window is open, showing a 'Correction Set Name' field with 'Set Name' entered. The 'Edit Object' window is open, showing a 'Class' of 'Buoy, safe water', a 'Set' of 'AML', and a 'Type' of 'Point'. The 'Set Name for ALL' window is open, showing a table with columns for 'State Type Class', 'Name', and 'Date'. The 'Add from chart' button is highlighted. The 'OK' button is highlighted in the 'Edit Object' window.

- 1 Middle click on the chart and select 'Chart Corrections'.
- 2 Open 'Manual Corrections...'
- 3 Click 'New Set...'
- 4 Enter a 'Set Name'.
- 5 Click 'OK'.

- 6 Click 'Add'.
- 7 Configure 'Class', 'Set' and 'Type'.
- 8 Enter your object name.
- 9 Left click to place your object on the chart.

- 10 Use 'Default Attributes' for your object.
- 11 Alternatively, configure your own attributes.
- 12 Click 'OK' to finish.

2.3 Chart Updates

The screenshot displays the ECDIS software interface. On the left, a data panel shows vessel information: HDG: 091.5°T, COG: 087.5°T, SOG: 3.1 kn, and various sensor readings. The main area shows a menu structure with 'Chart Corrections' highlighted (1). A sub-menu is open, showing 'Update Charts...' selected (2). A dialog box titled 'Update Charts' is open, with 'S57/AML' selected in the list (3) and the 'Select' button highlighted (4). Below this, another dialog box titled 'Updating Session Summary Report' is shown, with the 'OK' button highlighted (5). The report text includes: 'Producer: MPA Hydrographic Department, Maritime and Port Authority, Singapore (SG); AVCS Video: SGSC4035 - Ed 14 (2013 Sep 26) - UPDATED to Update#002 (2014 Jan 01); Total number of Updates found on CD-Rom: 1; Total number of Updates installed: 1'.

- 1 Middle click and select 'Chart Corrections'.
- 2 Click 'Update Charts...'.
- 3 Select 'S57/AML'.

- 4 Click 'Select'.
- 5 Click 'OK' once 'Updating Session Summary Report' appears.

2.4 No Go Areas/User Charts

The screenshot shows the ECDIS interface with the following elements:

- Top Bar:** ECPINS, 2000 Jan 01 12:00:00 Bravo, 19:01:53 Bravo Low Disk Space Remaining disk space 9.8% (23.5 GB)
- Chart Info:** [UNDERSCALE] (14 Nov 2018) USSNY1DM - NOAA 12335 - Hudson and East Rivers Governors Island to 67th Street
- Features(S):** - 0.50 NM 1:10600 FP NJP EC
- Left Panel (Status/Route):**
 - Hdg: (HDG1) 016.4°T
 - COG: (POS1) N/A
 - SOG: (POS1) 0.0 kn
 - Lat: 40° 42.719' N
 - Lon: 073° 58.361' W
 - Sea area/named wat
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: sanfran
 - WP Brg: wp 2 to wp 1
 - Crs/CTM: 281 9°T
 - DTG: 351 3/351 3°T
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Foreshore
- Main Menu:** Main Menu, Screen Layout, Color Scheme, Chart Selection, Chart Corrections (1), Radar Maps, Navigation Tools, Contacts, Routes, Markers, Setup, Alert Monitor, Man Overboard, Shutdown
- Chart Corrections Menu:** Chart Corrections, Manual Corrections... (2), Quick Corrections..., Copy Chart Corrections to Disk..., Copy Chart Corrections from Disk..., Print Chart Corrections Report..., Update Charts..., Review Chart Updates...
- Manual Corrections Dialog:** Show Chart, Correction Set, OK ALL, Set 1, Show/Hide Set, New Set... (3), OK, Cancel, Delete Set, Remove Selection Set, Merge
- New Correction Sets Dialog:** Correction Set Name: Set Name (4), OK (5), Cancel, All, Chart
- Edit Object Dialog:** Class: Dam (7), Set: AML, Type: Area, Name: No Go Area (8), Use Default Attributes (10), Add, Insert, Delete, Move, Move Handle, Move Object, Previous, Set 1 of 1, Next, Latitude, Longitude, Accept, OK (12), Cancel, Keyboard, Attributes (11)
- Set Name for ALL Dialog:** State Type Class, Name, Date, Add (6), Add from Chart, Merge, Exclude, Move Up, OK, Locate, Contours, Edit, Delete, Move Down, Cancel

- 1 Middle click on the chart and select 'Chart Corrections'.
- 2 Open 'Manual Corrections...'
- 3 Click 'New Set...'
- 4 Enter a 'Set Name'.
- 5 Click 'OK'.
- 6 Click 'Add..!'
- 7 Configure 'Class', 'Set' and 'Type'.
- 8 Enter your object name.
- 9 Left click to place your areas/circles on the chart.
- 10 Use 'Default Attributes' for your object.
- 11 Alternatively, configure your own 'Attributes'.
- 12 Click 'OK' to finish.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour

The screenshot shows the ECDIS interface with the following elements:

- Top Status Bar:** ECF: NS, 2009 Jan 01, 12:00:00 Bravo, 02:11:03 Bravo, Low Disk Space, Remaining disk space: 9.7% (23.2 GB)
- Chart Title:** [OVERSCALE X1.3] (20 Nov 2018) US4NY1AM - NOAA 12326 - Approaches to New York Fire Island Light to Sea Girt
- Chart Features:** Features B+L + - 3 NM 1.63700 FP NUP EC S63
- Left Panel (Data):**
 - Hdg: HDG1 019.0°T
 - COG: POS11 N/A
 - SOG: POS11 0.1 kn
 - Lat: 40° 42.759' N
 - Lon: 073° 58.342' W
 - Sea area: named wat
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: sanfran
 - WP Brg: wp 2 to wp 1
 - 281.9°T
 - Crs CTM: 351.3/351.3°T
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: Military pract
 - Srg: 152.1°T
 - Rng: 18.99 NM
 - Lat: 40° 25.962' N
 - Lon: 073° 46.700' W
 - TTG: 7 d 21 h
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Foreshore
- Main Chart Area:** Context menu with options: Main Menu, Screen Layout, Color Scheme, Chart Selection, Chart Corrections, Radar Maps, Navigation Tools, Contacts, Routes, Markers, Setup (1), Alert Monitor, Man Overboard, Shutdown.
- Settings Panel:**
 - Setup
 - Sensor Setup
 - Display Setup
 - Sound <ON> OFF
 - Set Resource Monitoring...
 - Alert Self-Test
 - System Self-Test...
 - Display System Settings...
 - System Setup Summary...
 - Display Shortcuts...
 - Select System Units
 - Select Time Zone...
 - Set True Motion Paging...
 - Export ARPA Map to Disk...
 - Vessel Setup (2)
 - Position Adjustment
 - Voyage Data Recording
 - Screen Captures
 - Voyage Plans
 - Software Licenses
 - Security
 - Help...
 - About...
- Vessel Setup Panel:**
 - Vessel Setup
 - Ship Symbol <ON> AUTO
 - Set Depth Mode...
 - Set Safety Depth... (3)
 - Set Depth Alarm...
 - Vessel Templates...
 - Set Measurement Errors...
 - Set Anti-grounding...
 - Anti-grounding <ON> OFF
- Set Safety Depth (9.0 m) and Height Dialog:**
 - Draught: 8.0 (4) m
 - Keel Clearance: 1.5 (5) m
 - Safe Vertical Clearance: 12.0 m
 - Height: 20.0 m
 - OK (6) / Cancel

1 Middle click on the chart and select 'Setup'.

2 Click 'Vessel Setup'.

3 Open 'Set Safety Depth...'.

4 Set your vessel 'Draught'.

5 Set your vessel 'Keel Clearance'.

6 Click 'OK'.

3.2 Display Preference Options

The screenshot shows the ECDIS interface with the following data and menu options:

ECPIINS 2000 Jan 01 12:00:00 Bravo 02:11:03 Bravo Low Disk Space Remaining disk space: 9.7% (23.2 GB)

Hdg: (HDG1) **019.0°T**
COG: (POS1) **N/A**
SOG: (POS1) **0.1 kn**

Lat: 40° 42.759' N
 Lon: 073° 58.342' W
 (POS1) Sea area/named wat

EBL: N/A
 Brg: N/A
 Rng: N/A
 Lat: N/A
 Lon: N/A

XTD: N/A
TTG: N/A

Route: sanfran
 wp 2 to wp 1
 WP Brg: 281.9°T
 Crs/CTM: 351.3/351.3°T
 DTG: N/A
 Dest ETA: N/A
 Next Crs: N/A

Cursor: Military practi
 Srg: 152.1°T
 Rng: 18.99 NM
 Lat: 40° 25.962' N
 Lon: 073° 46.700' W
 TTG: 7 day 21 h

Sensor: **GPS**
 HDOP: N/A
 Sats: N/A
 Beac Freq (kHz): N/A
 Beac Str: N/A
 Beac SNR (dB): N/A
 Anti-Gr: **Foreshore**

Main Menu
 Screen Layout ▶
 Color Scheme...
 Chart Selection ▶
 Chart Corrections ▶
 Radar Maps ▶
 Navigation Tools ▶
 Contacts ▶
 Routes ▶
 Markers ▶
Setup ①
 Alert Monitor...
 Man Overboard
 Shutdown...

Setup
 Sensor Setup ▶
Display Setup ②
 Sound <ON> OFF
 Set Resource Monitoring...
 Alert Self-Test
 System Self-Test...
 Display System Settings...
 System Setup Summary...
 Display Shortcuts...
 Select System Units ▶
 Select Time Zone...
 Set True Motion Paging...
 Export ARPA Map to Disk...
 Vessel Setup ▶
 Position Adjustment ▶
 Voyage Data Recording ▶
 Screen Captures ▶
 Voyage Plans ▶
 Software Licenses ▶
 Security ▶
 Help...
 About...

Display Setup
 Use Traditional Symbols
 Use Traditional Boundaries
 • Show Five Depth Shades
 Show Shallow Water Pattern
 • Highlight Shallow Dangers
 Full Light Sectors
 Filter Object by Scale
 Highlight Raster Updates
 • Show AML Charts
 Lost ARPA Warning ON <OFF>
 Route Display Options...
 Distance to Run...
 EBL/VRM/PI Display Options...
 Brightness and Contrast...
 Vessel Track...
 Velocity Vectors...
 Date Dependency Options...
 Set Highlighting...
 • Show Symbol Info on Query
 Standard Display on Startup
 • Use IMO Cursor ③

① Middle click on the chart and select 'Setup'.

② Click 'Display Setup'.

③ Configure settings in the 'Display Setup' menu to customise your display preference.

3.3 Display Configuration

ECPINS 21/01/2011 12:00:00 Bravo		02.11.03 Bravo Low Disk Space: Remaining disk space: 9.7% (23.2 GB)
OVERSCALE X1.31 20 Nov 2016 US4NY1AM - NDAA 1232b - Approaches to New York Fire Island Light to Sea Girt		
Features B- (1) - 3 NM 1:63700 FP NUP EC 563		
Hdg: HDG+ 019.0°T		
COG: POS+ N/A		
SOG: POS+ 0.1 kn		
Lat: 40° 42.759' N Lon: 073° 58.342' W POST: Sea area named wat		
EBL: N/A Brig: N/A Rng: N/A Lat: N/A Lon: N/A		
XTD: N/A		
TTG: N/A		
Route: sanfran wp 2 to wp 1 WP Brg: 281.9 T Crs CTM: 351.3/351.3 T DTG: N/A Dest ETA: N/A Next Crs: N/A		
Cursor: Military practi Brig: 152.1 T Rng: 18.99 NM Lat: 40° 25.962' N Lon: 073° 46.700' W TTG: 7 d 21 h		
Sensor: GPS HDOP: N/A Sats: N/A Beac Freq (kHz): N/A Beac Str: N/A Beac SNR (dB): N/A Anti-Gr: Foreshore		

Feature Settings - Standard

Category: **Overlays** (2) Standard (8)

Available Features

(3)

REMOVE (6)

ADD (4)

Displayed Features

(5)

Edit Files
Feature Info
OK (7)
Cancel

- 1 Click 'Features'.
- 2 Select your 'Overlays' category.
- 3 Select a layer from 'Available Features' by left clicking on it.
- 4 Click 'ADD' to activate the layer.
- 5 Select a layer from 'Displayed Features' by left clicking on it.
- 6 Click 'REMOVE' to deactivate the layer.
- 7 Click 'OK' to save settings.
- 8 Reset to 'Standard' settings.

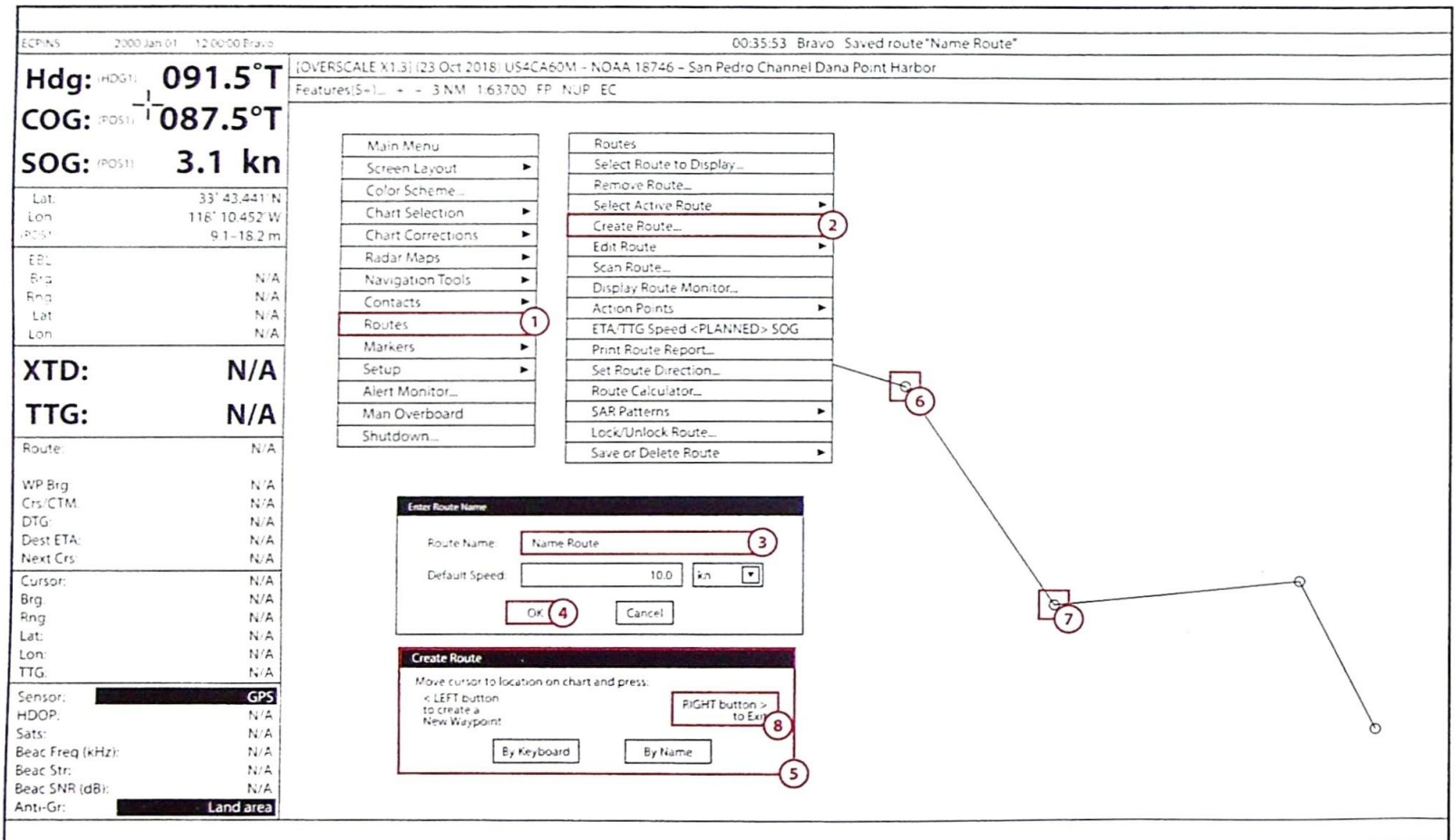
3.4 Abbreviations

ECPINS 2000 Jan 01 12:00:00 Bravo		02:11:03 Bravo Low Disk Space Remaining disk space: 9.7% / 23.2 GB	
Hdg ⁽¹⁾ 019.0°T		[OVERSCALE X1.3] (20 Nov 2018) US4NY1AM - NOAA 12326 - Approaches to New York Fire Island Light to Sea Girt	
COG ⁽²⁾ N/A		Features(B+)... r - 3 NM 1:63700 FP NUP EC S63	
SOG ⁽⁴⁾ 0.1 kn			
Lat ⁽⁵⁾	40° 42.759' N		
Lon ⁽⁶⁾	073° 58.342' W		
Sea area/named wat			
EBL ⁽⁷⁾			
Brg ⁽⁸⁾	N/A		
Rng ⁽⁹⁾	N/A		
Lat	N/A		
Lon	N/A		
XTD ⁽¹⁰⁾	N/A		
TTG ⁽¹¹⁾	N/A		
Route: sanfran			
wp 2 to wp 1			
WP Brg ⁽¹²⁾	281.9°T		
Crs/CTM ⁽¹³⁾	351 3/351 3°T		
DTG ⁽¹⁴⁾	N/A		
Dest ETA ⁽¹⁵⁾	N/A		
Next Crs.	N/A		
Cursor: Military practi			
Brg	152.1°T		
Rng	18.99 NM		
Lat	40° 25.962' N		
Lon	073° 46.700' W		
TTG	7 d 21 h		
Sensor	GPS ⁽¹⁶⁾		
HDOP	N/A		
Sats	N/A		
Beac Freq (kHz)	N/A		
Beac Str	N/A		
Beac SNR (dB)	N/A		
Anti-Gr ⁽¹⁷⁾	Foreshore		

- 1** Heading
- 7** Electronic Bearing Line
- 13** Course/Course to Maintain
- 2** Course Over Ground
- 8** Bearing
- 14** Distance to Go
- 3** Position
- 9** Range
- 15** Estimated Time of Arrival
- 4** Speed Over Ground
- 10** Cross Track Distance
- 16** Global Positioning System
- 5** Latitude
- 11** Time to Go
- 17** Horizontal Dilution of Precision
- 6** Longitude
- 12** Waypoint Bearing

Section 4: Route Planning

4.1 Creation



1 Middle click and select 'Routes' from the main menu.

2 Click 'Create Route...'

3 Enter a name for your route.

4 Click 'OK'.

5 The 'Create Route' window will open.

6 Left click on the chart to place your first waypoint.

7 Consecutive left clicks will place more waypoints.

8 Right click anywhere on the screen to finish placing waypoints.

4.2 Route Checking

Routes

- Select Route to Display
- Remove Route
- Select Active Route
- Create Route
- Edit Route**
- Scan Route...
- Display Route Monitor
- Action Points
- ETA/TTG Speed < PLANNED > SOG
- Print Route Report
- Set Route Direction
- Route Calculator
- SAR Patterns
- Lock/Unlock Route
- Save or Delete Route

Scan Route Legs

Move cursor to location on chart and press:
+ LEFT button to select the first Waypoint
RIGHT button to Exit

By Keyboard By Name

Edit Route

- Add Waypoint
- Move Waypoint
- Name Waypoint
- Insert Waypoint
- Delete Waypoint
- Move Leg
- Subdivide Leg
- Leg Properties
- Scan Route Legs**
- Waypoint Properties
- Set Turn Radius
- Set Advance and Transfer
- Move Wheel Over Point
- Set Height of Tide
- Set Tidal Stream

Scan Results for Route 'Name Route' - Safety Depth: 9.0m

Leg	Number of Results Found
wp 1 to wp 2	2
wp 2 to wp 3	2
wp 1 to wp 4	2
wp 4 to wp 5	2

Back Select Exit

Scan Route: Name Route - Please Wait...

Loading charts for leg wp 2 to wp 3 ...

Cancel

- 1 Ensure you are in the 'Routes' menu.
- 2 Click 'Edit Route'.
- 3 Click 'Scan Route Legs...'

- 4 The 'Scan Route Legs' window will open.
- 5 Left click on the first waypoint.
- 6 Left click on the last waypoint.

- 7 Route will begin checking.
- 8 Select a leg from the 'Scanned Route' list.
- 9 Click 'Select' to review the list.

4.3 Optimisation/Schedule

The screenshot shows the ECDIS interface with the following elements:

- Top Status Bar:** ECPINS Warship, 2000 Jan 01, 12:00:00 Bravo, 00:35:53 Bravo, Saved route "Name Route"
- Left Sidebar:**
 - Hdg: HDG1: 091.5°T
 - COG: POS1: 087.5°T
 - SOG: POS1: 3.1 kn
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W
 - EBL: Brg: N/A, Rng: N/A, Lat: N/A, Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A, Crs: CTM: N/A, DTG: N/A, Dest ETA: N/A, Next Crs: N/A
 - Cursor: N/A, Brg: N/A, Rng: N/A, Lat: N/A, Lon: N/A, TTG: N/A
 - Sensor: GPS
 - HDOP: N/A, Sats: N/A, Beac Freq (kHz): N/A, Beac Str: N/A, Beac SNR (dB): N/A, Anti-Gr: Land area
- Main Display:**
 - Context menu: Routes, Select Route to Display..., Remove Route..., Select Active Route, Create Route..., Edit: Route, Scan Route..., Display Route Monitor..., Action Points, ETA/TTG Speed <PLANNED> SOG, Print Route Report..., Set Route Direction..., Route Calculator... (1), SAR Patterns, Lock/Unlock Route..., Save or Delete Route
 - Route Calculator [FWD] (Sub-Route Mode) dialog:
 - Route: My Route (2)
 - Origin: wp 1 (3)
 - Destination: wp 6 (4)
 - Buttons: Calculate SOA (kn), Calculate TTG, Calculate ETD, Calculate ETA
 - Table:

From	To	DTG	Calculate SOA (kn)	Calculate TTG	Calculate ETD	Calculate ETA
 - Mode: Monitor, Planned, Sub-Route (5)
 - Buttons: Apply (10), Calculate (9), Cancel

- 1 Select 'Route Calculator...'
- 2 Select your route from the dropdown list.
- 3 Set the first waypoint you want to configure from.

- 4 Set the last waypoint you want to configure to.
- 5 Click 'Sub-Route'.
- 6 Enter a speed.

- 7 Enter an ETD.
- 8 Enter an ETA.
- 9 Click 'Calculate'.
- 10 Click 'Apply'.

4.4 Selecting Active Route

The screenshot displays the ECDIS interface with the following elements:

- Header:** ECPINS Warship - 2000 Jan 01 12:00:00 Bravo | 00:35:53 Bravo Saved route "Name Route"
- Data Panel (Left):**
 - HDG: (HDG1) 091.5°T
 - COG: (POS1) 1087.5°T
 - SOG: (POS1) 3.1 kn
 - Lat: 33° 43.411' N
 - Lon: 118° 10.452' W
 - EBL: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: **GPS**
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: **Land area**
- Routes Menu (Center):**
 - Routes
 - Select Route to Display...
 - Remove Route
 - Select Active Route (1)
 - Create Route...
 - Edit Route
 - Scan Route...
 - Display Route Monitor...
 - Action Points
 - ETA/TTG Speed <PLANNED> SOG
 - Print Route Report...
 - Set Route Direction...
 - Route Calculator...
 - SAR Patterns
 - Lock/Unlock Route...
 - Save or Delete Route
- Secondary Menu (Right):**
 - Select Active Route
 - Select Route with Cursor...
 - Select Round by Name (2)
 - Select Active Waypoint...
- Select Route by Name Dialog (Bottom Right):**
 - Select Route by Name
 - Select Active Route
 - My Route
 - PLANNED ROUTE
 - SEARCH
 - EXIT

1 From the 'Routes' menu, click 'Select Active Route'.

3 Select your route from the list available.

4 Click 'Select' to activate your route.

2 Click 'Select Route by Name...'

Section 5: Route Monitoring

5.1 Look-Ahead

The screenshot shows the ECDIS interface with the following elements:

- Top Panel:** ECDIS 2000 Jan 01 12:00:00 Bravo, 00:35:53 Bravo Saved route "Name Route"
- Data Panel (Left):**
 - Hdg: (POST) 091.5°T
 - COG: (POST) 087.5°T
 - SOG: (POST) 3.1 kn
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W
 - POST: 9.1–18.2 m
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Land area
- Central Menu:**
 - Main Menu
 - Screen Layout
 - Color Scheme...
 - Chart Selection
 - Chart Corrections
 - Radar Maps
 - Navigation Tools
 - Contacts
 - Routes
 - Markers
 - Setup (1)
 - Alert Monitor...
 - Man Overboard
 - Shutdown...
 - Setup
 - Sensor Setup
 - Display Setup
 - Sound <ON> OFF
 - Set Resource Monitoring...
 - Alert Self-Test
 - System Self-Test...
 - Display System Settings...
 - System Setup Summary...
 - Display Shortcuts...
 - Select System Units
 - Select Time Zone...
 - Set True Motion Paging...
 - Export ARPA Map to Disk...
 - Vessel Setup (2)
 - Position Adjustment
 - Voyage Data Recording
 - Screen Captures
 - Voyage Plans
 - Software Licenses
 - Security
 - Help...
 - About...
- Vessel Setup Panel (Right):**
 - Ship Symbol <ON> AUTO
 - Set Depth Mode...
 - Set Safety Depth...
 - Set Depth Alarm...
 - Vessel Templates...
 - Set Measurement Errors...
 - Set Anti-grounding... (3)
 - Anti-grounding <ON> OFF
- Set Anti-grounding Dialog (Right):**
 - Extension: Port, Starboard, Bow, Stern
 - Lock-Ahead: Angle, Width, Distance, Time
 - Time Filter: Search within time period, Search all objects
 - Scan: Visible charts, All loaded charts
 - Highlight: Anti-grounding dangers
 - Buttons: OK (5), Cancel (4)

1 Middle click on the chart and select 'Setup'.

2 Click 'Vessel Setup'.

3 Click 'Set Anti-grounding...'

4 Configure anti-grounding settings, as required.

5 When finished, click 'OK' to save changes.

5.2 TT/AIS/Vectors

The screenshot displays the ECDIS interface with the following elements:

- Top Bar:** ECPINS, 2000 Jan 01 12:00:00 Bravo, 00:35:53 Bravo, Saved route "Name Route"
- Chart Info:** [OVERSCALE X1.3] (23 Oct 2018) US4CA60M - NOAA 18746 - San Pedro Channel Dana Point Harbor, Features(S+)... + - 3 NM 1:63700 FP NUP EC
- Data Fields:**
 - Hdg: (HDG1) 091.5°T
 - COG: (POS1) 087.5°T
 - SOG: (POS1) 3.1 kn
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W (POS1) 9.1-18.2 m
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Land area
- Menus and Settings:**
 - Main Menu:** Man Menu, Screen Layout, Color Scheme, Chart Selection, Chart Corrections, Radar Maps, Navigation Tools, **Contacts** (1), Routes, Markers, Setup (4), Alert Monitor, Man Overboard, Shutdown.
 - Contacts:** Contacts, Contact Info..., Contact Intercept..., Contact Update..., Create Operator Contact..., Delete Operator Contact..., Contact Symbols: DEFAULT <SIMPLE>, AIS Settings..., AIS Filtering..., ARPA Filtering..., Target Limits..., Set CPA/TCPA Alarm Limits..., Contact Association..., AIS Messaging, AIS Manual Activation, Scroll Contacts Table Up, Scroll Contacts Table Down (2).
 - Setup:** Setup, Sensor Setup, Display Setup (5), Sound <ON> OFF, Set Resource Monitoring..., Alert Self Test, System Self Test..., Display System Settings..., System Setup Summary..., Display Shortcuts..., Select System Units, Select Time Zone..., Set True Motion Paging..., Export ARPA Map to Disk..., Vessel Setup, Position Adjustment, Voyage Data Recording, Screen Captures, Voyage Plans, Software Licenses, Security, Help, About...
 - Display Setup:** Display Setup, Use Traditional Symbols, User Traditional Boundaries, Show Five Depth Shades, Show Shallow Water Pattern, Highlight Shallow Dangers, Full Light Sectors, Filter Object by Scale, Highlight Raster Updates, Show AML Charts, Lost ARPA Warning ON <OFF>, Route Display Options..., Distance to Run..., EBL/VRM/PI Display Options..., Brightness and Contrast..., Vessel Track, Velocity Vectors... (6), Data Dependency Options..., Set Highlighting, Show Symbols Info on Query, Standard Display on Startup, Use IMO Cursor.
 - AIS Settings:** AIS Settings, Auto-Activation, Activation Sleeping targets, By Range: [] m, By CPA: [] m, By TCPA: [] day, Class A Targets, Class B Targets, Lost AIS Warning by range [] NM, OK, Cancel (3).
 - Velocity Vectors:** Velocity Vectors, Orientation: True (selected), Relative, Mode: Standard, Variable, Length: Standard, Variable, Show Time Marks, OK, Cancel (7).

1 Middle click on the chart and select 'Contacts'.

2 Many AIS/TT settings are available here.

3 Example of 'AIS Settings' menu.

4 Click 'Setup'.

5 Click 'Display Setup'.

6 Open 'Velocity Vectors...' menu.

7 Configure vectors, as required.

5.3 Position Fixing Part 1

The screenshot displays the ECDIS interface with the following elements:

- Top Status Bar:** ECPINS, 2000 Jan 01 12:00:00 Bravo, 19:01:53 Bravo, Saved route*Name Route*
- Navigation Data:** Hdg: (HDG1) 091.5°T, COG: (POS1) 087.5°T, SOG: (POS1) 3.1 kn, Lat: 33° 43.441' N, Lon: 118° 10.452' W, EBL, Rng, Lat, Lon, XTD: N/A, TTG: N/A, Route: N/A, WP Brg, Crs/CTM, DTG, Dest ETA, Next Crs, Cursor, Brg, Rng, Lat, Lon, TTG, Sensor: GPS, HDOP, Sats, Beac Freq (kHz), Beac Str, Beac SNR (dB), Anti-Gr: Land area
- Main Menu:** Main Menu, Screen Layout, Color Scheme, Chart Selection, Chart Corrections, Radar Menu, Navigation Tools (1), Contacts, Routes, Markers, Setup, Alert Monitor, Main Overboard, Shutdown.
- Navigation Tools:** EBL VRM 1, EBL VRM 2, EBL VRM 3, Hazard 1, Hazard 2, Query Chart Features, Display Chart Info at Location, Clearing Lines, Ghost Ship, Calculator, Locate (2), Fixing (3), Set and Drift, Force Protection, Zone Alarms, Waterspace Management, Tides and Currents, Log Book.
- Fixing Menu:** Reference Points (3), Create Operator Fix (12), Create Manual Fix, Apply Sensor Fix, Clear LOPs, Clear Fix History, Set Ordered Course and Speed, Copy Reference Points to Disk, Copy Reference Points from Disk.
- Reference Points Dialog:** Shows a table with columns Name, Date, and Date. It includes buttons for Add (7), Edit, Delete, and OK.
- Add Reference Point Dialog:** Fields for Name, Information, #, Latitude, Longitude, and buttons for Accept, OK (11), Cancel, Next (10), and Attributes (8).
- Set Confidence Ellipse Dialog:** Fields for Major Axis (0.799 m), Minor Axis (0.547 m), Orientation (152.8 T), Confidence (95 %), and buttons for Apply (18) and Exit (19).
- New Reference Group Dialog:** Field for Group name (Reference Points) and buttons for OK (6) and Cancel.
- Create Operator Fix Dialog:** Bearing Mode (True/Relative), Fix Interval (Length: 3.0, Number: 2), and a table for reference points with columns Time, Type, Ref, Measurement, and buttons for Place Fix (16), Add Ref Pt, Clear LOPs, and Exit.
- Create Operator Fix Dialog (Bottom):** Instructions for using keyboard or name to enter operator fix, with buttons for By Keyboard and By Name (17).

- 1 Middle click and select 'Navigation Tools'.
- 2 Select 'Fixing'.
- 3 Click 'Reference Points...'
- 4 Click 'New Group'.
- 5 Enter a name for your group.
- 6 Click 'OK'.

- 7 Click 'Add...'
- 8 'Add Reference Point' window will be open.
- 9 Left click to place your reference point.
- 10 Click 'Next' and then repeat step 9 to place another reference point.

- 11 Immediately after placing your last reference point, instead of clicking 'Next', click 'OK' and accept any further menus.
- 12 Click 'Create Operator Fix...'
- 13 Enter the reference letter for each reference.
- 14 Enter the bearing for each reference.

5.3 Position Fixing Part 2

The screenshot displays the ECPINS software interface with the following components:

- Header:** ECPINS 2000 Jan 01 12 00:00 Bravo | 19:01:53 Bravo Saved route "Name Route"
- Navigation Data:**
 - Hdg: (HDG1) **091.5°T**
 - COG: (POS1) **087.5°T**
 - SOG: (POS1) **3.1 kn**
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W (POS1) 9.1-18.2 m
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: **GPS**
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: **Land area**
- Main Menu:** Main Menu, Screen Layout, Color Scheme, Chart Selection, Chart Corrections, Radar Maps, Navigation Tools, Contacts, Routes, Markers, Setup, Alert Monitor, Man Overboard, Shutdown.
- Navigation Tools:** EBL/VRM 1-3, Hazard 1-2, Query Chart Features, Display Chart Info, Clearing Lines, Ghost Ship, Calculator, Locate, Fixing, Set and Drift, Force Protection, Zone Alarms, Waterspace Management, Tides and Currents, Log Book.
- Fixing:** Reference Points, Create Operator Fix, Create Manual Fix, Apply Sensor Fix, Clear LOPs, Clear Fix History, Set Ordered Course and Speed, Copy Reference Points to Disk, Copy Reference Points from Disk.
- Reference Points Dialog:** Shows a table of reference points (A, B, C) with Name, Date, and Time.
- Add Reference Point Dialog:** Fields for Name, Information, #, Latitude, and Longitude.
- Set Confidence Ellipse Dialog:** Fields for Major Axis (0.799 m), Minor Axis (0.547 m), Orientation (152.8 T), and Confidence (95 %).
- Fixing Dialog:** Bearing Mode (True/Relative), Fix Interval (Length: 3.0 min, Number: 2), and a table for marking reference points.
- Place Operator Fix Dialog:** Options for By Keyboard and By Name.

15 After entering each bearing, click 'Mark'.

17 Right click to accept the fix.

19 Click 'Exit'.

16 Click 'Place Fix'.

18 Click 'Apply'.

5.4 Playback

The screenshot displays the ECDIS software interface during the playback setup process. The top status bar shows 'ECPINS 2000 Jan 01 12:00:00 Bravo' and '00:35:53 Bravo Saved route "Name Route"'. Below this, a data panel displays 'Hdg: (HDG1) 091.5°T', 'COG: (POS1) 087.5°T', and 'SOG: (POS1) 3.1 kn'. A central menu is open, showing 'Setup' selected. To the right, a 'Voyage Data Recording' menu is open, with 'Playback Recorded Data...' selected. Below that, a 'Select Recorded Voyage Data' dialog box shows two options: 'Current Log - High Density (2019 Dec 21-2019 Dec 29)' and 'Current Log - Low Density (2019 Jun 05-2019 Dec 29)'. At the bottom, a 'Playback Mode' control panel shows a timeline from '2019 Dec 21 02:00:00' to '2019 Dec 29 03:05:04' with 'Start', 'Pause', and 'Stop' buttons. Red callout boxes with numbers 1 through 6 point to specific steps in the interface.

1 Middle click and select 'Setup'.

2 Select 'Voyage Data Recording'.

3 Select 'Playback Recorded Data...'

4 Select 'Voyage Data' from the list.

5 Click 'Select'.

6 Use the 'Playback' tool to monitor your playback.

Section 6: System Settings

6.1 Chart 1/Chart Query

The screenshot displays the ECDIS interface with the following elements:

- Top Status Bar:** ECPINS, 2000 Jan 01 12:00:00 Bravo, 00:35:53 Bravo, Saved route "Name Route"
- Left Sidebar (Vessel Data):**
 - Hdg: (HDG1) 091.5°T
 - COG: (POS1) 087.5°T
 - SOG: (POS1) 3.1 kn
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Land area
- Central Chart Area:** [OVERSCALE X1.3] (23 Oct 2018) US4CA60M - NOAA 18746 - San Pedro Channel Dana Point Harbor. Features(S+) + - 3 NM 1.63700 CC (4) P EC S63.
- Right Sidebar (Menu Options):**
 - RM (Relative Motion)
 - TM (True Motion)
 - FP (Fixed Position)
 - FP (Fixed Position - recall)
 - CC (Chart Centered - topmost) (5)
 - CC (Chart Centered - selected)...
- Main Menu (1):** Main Menu, Screen Layout, Color Scheme..., Chart Selection (1), Chart Corrections, Radar Maps, Navigation Tools, Contacts, Routes, Markers, Setup, Alert Monitor..., Man Overboard, Shutdown...
- Chart Selection (2):** Chart Selection, Load Charts... (2), Change Chart Order..., Remove Charts..., Auto Chart Loading Setup..., Auto Chart Loading <ON> OFF, Chart Install, Licenses, Display Chart Information Panel..., Display Chart Notes..., Display General T&P Notice to Mariners..., Enter Manual Datum Shift for Chart..., Print Chart Summary Report...
- Load Charts (3, 6, 7):** Load Charts dialog box showing a list of charts. 'Chart 1' is selected (3). The 'Load' button (7) is highlighted.

1 Middle click and select 'Chart Selection'.

2 Click 'Load Charts...'

3 Deselect all charts except for 'Chart 1'.

4 Click the motion dropdown.

5 Select 'CC (Chart Centered - topmost)'.

6 Select a section of 'Chart 1' from the list.

7 Click 'Load' to show the information.

6.2 Position/Heading/Speed

- 1 Middle click and select 'Setup'.
- 2 Select 'Sensor Setup'.
- 3 Click 'Select Primary Position Source...'
- 4 Select your input method from the list.
- 5 Click 'Select' to save.
- 6 Click 'Select Sensor Source...'
- 7 Select a sensor from the list.
- 8 Example 'Heading Source' selection menu.
- 9 Example 'Speed Source' selection menu.

6.3 Emergency Menus

- 1 Middle click and select 'Man Overboard' to place a marker in your ship's location.
- 2 Click 'Markers'.
- 3 Click 'Delete Man Overboard...' to remove the marker.
- 4 Click 'Routes'.

- 5 Click 'SAR Patterns'.
- 6 Click 'Add SAR Pattern'.
- 7 Select a pattern from the list.
- 8 Enter a name for your SAR route.
- 9 Click 'OK'.

- 10 You will be prompted to left click on the start position.
- 11 Left click on your required start position.
- 12 Configure SAR Pattern settings.
- 13 Click 'OK' to finish.

6.4 Manual/About

The screenshot displays the ECPINS interface with the following elements:

- Navigation Data (Left Panel):**
 - Hdg: (HDG1) 091.5°T
 - COG: (POS1) 087.5°T
 - SOG: (POS1) 3.1 kn
 - Lat: 33° 43.441' N
 - Lon: 118° 10.452' W
 - EBL: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - XTD: N/A
 - TTG: N/A
 - Route: N/A
 - WP Brg: N/A
 - Crs/CTM: N/A
 - DTG: N/A
 - Dest ETA: N/A
 - Next Crs: N/A
 - Cursor: N/A
 - Brg: N/A
 - Rng: N/A
 - Lat: N/A
 - Lon: N/A
 - TTG: N/A
 - Sensor: GPS
 - HDOP: N/A
 - Sats: N/A
 - Beac Freq (kHz): N/A
 - Beac Str: N/A
 - Beac SNR (dB): N/A
 - Anti-Gr: Land area
- Main Menu (Center-Left):**
 - Main Menu
 - Screen Layout
 - Color Scheme
 - Chart Selection
 - Chart Corrections
 - Radar Maps
 - Navigation Tools
 - Contacts
 - Routes
 - Marks
 - Setup (1)
 - Alarm Monitor
 - Map Overboard
 - Shutdown
- Setup Menu (Center-Left):**
 - Setup
 - Sensor Setup
 - Display Setup
 - Sound (ON/OFF)
 - Set Resource Monitoring...
 - Alert Self-Test
 - System Self-Test
 - Display System Settings
 - System Setup Summary...
 - Display Shortcuts
 - Select System Units
 - Select Time Zone
 - Set True Motion Paging...
 - Export ARPA Map to Disk
 - Vessel Setup
 - Position Adjustment
 - Voyage Data Recording
 - Screen Captures
 - Voyage Plans
 - Software Licenses
 - Security
 - Help... (2)
 - About... (4)
- ECPINS Browser (Center-Right):**
 - Contents
 - Index
 - Search
 - ECPINS Warship 6.2 Operator's Manual
 - ECPINS Operator's Manual 6.2
 - Printable version of this document (PDF)
- About ECPINS (Bottom-Right):**
 - ECINS 6.2 - License expires on: _____
 - ECINS Release 2016
 - OK (5)

1 Middle click and select 'Setup'.

3 The system manual is displayed.

5 The system 'About' page is displayed.

2 Click 'Help...'

4 Click 'About...'

11. PC MARITIME NAVMASTER – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display Become familiar with the basic chart functionality from the main display.	
	Menu Bar	Toolbars
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Tools	Toolbars
	Mariner Overlays	Mariner Tools
		Add VRM
		Add event marker
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Toolbars	
	Standard Toolbar	Scale selector
	Chart Toolbar	Range Selector
	Vector Chart Toolbar	Range and Bearing Tool
	Hide Quality of Data Symbol (ON/OFF)	Display Soundings (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Route	
	Edit	Calculate
	New	Copy
	Selection	Reverse
	Waypoint	Delete
	Plan	Options
	Arrival circles (ON/OFF)	
	Turning circles (ON/OFF)	
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
	Monitoring	Toolbars
	Waypoint Detection	Display Toolbar
	Great Circle	Voyage Toolbar
	Vessel	AIS Toolbar
	Overlays	ARPA Toolbar
	Track	Radar Overlay Toolbar
	Warnings	Mariner Tools
	Speed and Direction Vector (Applied to all targets) (ON/OFF)	Vector Chart Toolbar
	Past track (ON/OFF)	
	Mariner Overlay (ON/OFF)	
7.	Chart Updating The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.	
	Manual Updates Toolbar	Chartpoint

PC MARITIME NAVMASTER – Familiarisation Checklist (Page 2 of 2)

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Navigator

Position Source...	Dynamic (ON/OFF)
NMEA	Course
AIS	Speed
Dead Reckoning	Set
Vessel Position	Drift

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Warnings

Position Monitoring Alarms	Prohibited Area/Special Condition Alarms
Guard Zone Size	Mariner Overlay (ON/OFF)
Distance (NM)	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Tools

Window

Voyage Data Recording	
Vessel	
Overlays	
Track	

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

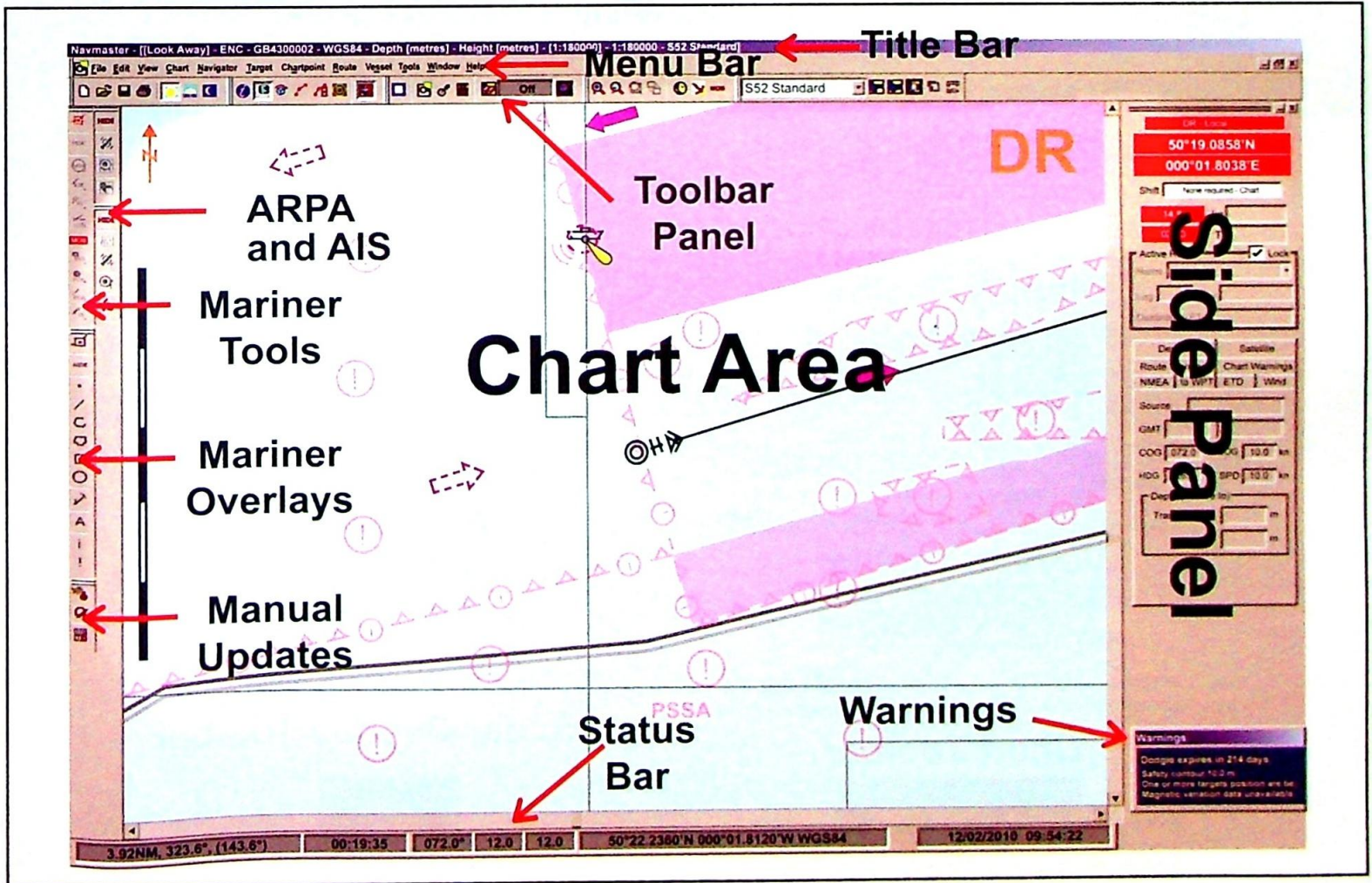
Help

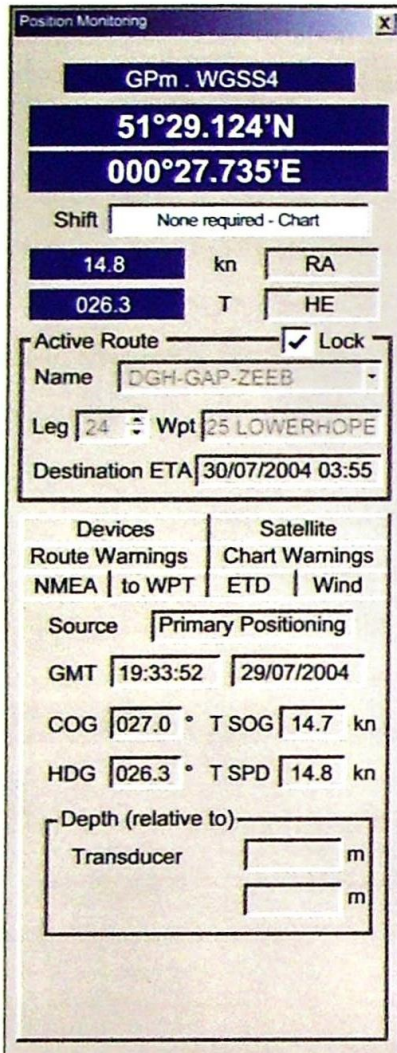
Navmaster Help	Display ECDIS Chart 1
User Guide	System Information
List of Abbreviations	

PC MARITIME NAVMASTER

Key PC MARITIME NAVMASTER ECDIS Menu Functions

1.	Configuration of Ship's Parameters (Length, Breadth, etc.)	Setup Mode>Vessel Menu>Setup>General Tab
2.	View Installed Charts (Official)	Chart Menu>Management>ENC or ARCS>Charts
3.	View the latest update number installed	Chart Menu>Management>ENC or ARCS>Chart Updates
4.	View ARCS Chart Updates	Chart>Options>ARCS>Limit Lines>Chart Updates
5.	View information on charted objects and view additional text	Display Toolbar>Chart Information Icon>Left click on chart
6.	Configure Chart Go to Parameters	Vector Chart Toolbar>Presentation Parameters Icon
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Vector Chart Toolbar>Safety Contours Icon
8.	Input a User Chart Object	Mariner Overlays Toolbar>Select appropriate object
9.	Input a Manual Update	Manual Updates Toolbar>Add Manual Update
10.	Turn the ship outline on	Options>Vessel Options>Overlays>Vessel Shape>Automatic
11.	Configure the Check Safety Zone (Anti-grounding Cone)	Options>Vessel Options>Warnings>Display Guard Zones
12.	Configure Velocity Vectors	Options>Vessel Options>Overlays>Speed and Direction Vector
13.	Manually change the active WPT	Position Monitoring>to Wpt (route must be unlocked)
14.	View to past Alarms and Warnings	View>System Messages>Select relevant category
15.	Input a Visual or Radar Fix	Mariner Tools>Lines Of Position or Manual Position Fix





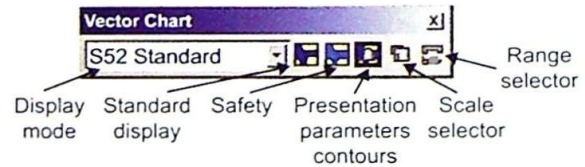
- ← Primary Position Source
- ← Primary Position
- ← Applied Datum Shift
- ← Course and Speed
- ← Active Route Information
- ← Position Monitoring Panel:
 - Devices
 - Satellite
 - Route Warnings
 - Chart Warnings
 - NMEA to WPT
 - ETD
 - Wind

Standard Toolbar

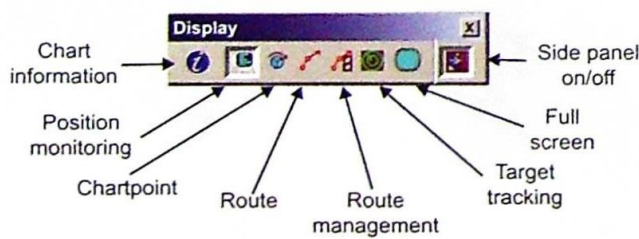


New Open Save Print Day Dusk Night

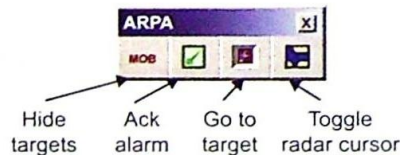
Vector Chart Toolbar



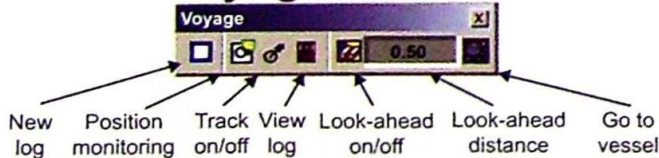
Display Toolbar



ARPA Toolbar



Voyage Toolbar



AIS Toolbar

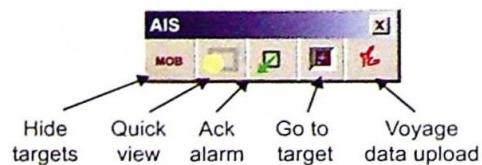
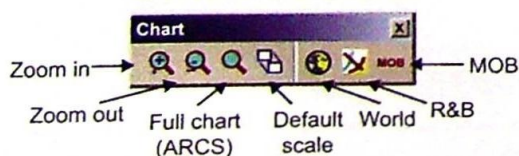
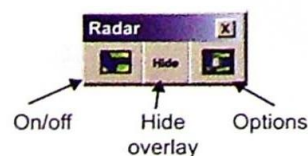


Chart Toolbar



Radar Overlay Toolbar



12. Raytheon Anschütz ECDIS NX – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display Become familiar with the basic chart functionality from the main display.	
	Shortcut Bar	
	Radar Overlay	STM
	Orientation Mode	TGT
	Scale	EBL/VRM
	SHIP CENT	PICK
	Display Type	DEF DISP
	PLAN/SAIL	Notification
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Menu Selection	
	DISP	CHART
	SHIP	DISP
	USER	TOOLS
	COL DIM	OVERLAYS
	VECTOR LENGTH (1 to 30 minutes)	DISPLAY DATE
	LOAD PROFILE	GOTO POSITION
	Night Colours	DRAW OBJECTS
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Shortcut Bar	
	Display Type – Settings Mode	OPTIONS
	CONTOURS & DEPTH	SPOT SOUNDINGS (ON/OFF)
	SAFETY CONTOUR	SCAMIN OFF (ON/OFF)
		ACCURACY (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Menu Selection	
	ROUTE	SAVE AS
	MGR	CHECK
	CATEGORIES	RESULTS
	ROUTE	ACTIVE
	EDIT	WAYPOINTS
	SELECTED ROUTE	SELECTED WPT
	CREATE LOAD UNLOAD	DISP
	EDIT	ROUTE/DISPLAY

Raytheon Anschütz ECDIS NX – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Menu Selection

TFT MENU	INS
TARGET	TOOLS
FULL LIST	CAL
TFT LIST	DISTANCE CALCULATION
TINDR LIST	LINE OF POSITION
OPTN	USB
FUNC	EVL VRM
LOG WATCH	

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Menu Selection

CHART	MGR
-------	-----

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Task Switcher

HD CONNING	Sensor
------------	--------

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alert Area	Permanent Indication Area
Alert	
MOD	
Mute	
ACK	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Menu Selection

FUNC	24H LOG
LOG WATCH	ADD LOG ENTRY
ANCHOR WATCH	

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

Menu Bar

Help	
------	--

13. Raytheon Anschütz SYNOPSIS ECDIS – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures	
	Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display	
	Become familiar with the basic chart functionality from the main display.	
	Tool Bar	
	Previous	Toggle ARCS/ENC
	Next	Select Chart
	Free Zoom	Select Info panel
	Zoom In	MOB
	Zoom Out	Default Display
	Center On Ship	Standard Display
	Free EBL	Target Menu
	Fixed EBL	Radar Overlay
	Mark At Ship	Weather Overlay
	Manual 24 hour Log Entries	Customization
	NavTex Dialog	
3.	Navigational Tools	
	Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Nav Tools	
	Free EBL/VRM	Cursor Information...
	Fixed EBL/VRM	Position Fix
	Show EBL/VRM Labels	Line Of Position...
	Rhumb/Great Circle Line	Tidal Prediction...
	Datum Transformation...	Magnetic Variation...
4.	Chart Display Settings	
	Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	ENC Options	
	Presentation Library	Other Display
	Chart1	User defined Display
	Mariners Objects...	Chart Options...
	Add Object	Chart Scale
	Manual Updates...	Display Date (Auto)...
	Show Manual Updates (ON/OFF)	Chart Indications...
	Legend...	Databases
	Base Display	SCAMIN OFF (ON/OFF)
	Standard Display	ACCURACY (ON/OFF)
5.	Route Planning	
	Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Routes	
	Edit Primary Route...	Clear Route...
	Create new Secondary Route...	Send Route to Radar
	Create SAR Pattern Route...	Send Primary Route to GPS1
	Automatic Route Planning/Port Information...	Route Monitoring...
	Route Manager...	Track Control...
	Toggle Routes	ETA Calculation...
	Save Route...	Distance-To-Run/Planned Position...
	Show Route...	Pre-Departure Checklist...
	List Route...	Alerts...
	Review Route Check Results...	Check Route...

Raytheon Anschütz SYNOPSIS ECDIS – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Display

Zoom In	Info Panel...
Zoom Out	Ship
Default Scale	Position Offset...
Largest Scale	Own Ship Vector and Look-Ahead...
Scale and Center...	Mark at Ship
View Area....	Anchor Watch...
Ship Auto Center...	Guard Zones
Ship True Scale Outline	Acquisition/Exclusion Zones
Bright Sun Colors	Man Overboard
Day Colors – White	Overboard All-Clear
Day Colors – Black	Vector Length (minutes)
Dust Colors	Look-Ahead Searchlight (ON/OFF)
Night Colors	

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Chart

Goto ARCS/ENC Chart	License
Info/Select...	User Permit
ENC + CM93/3 Chart Catalog	Installation
ENC Update Status Report	Updates
	Update Review

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Integration

Nav Device Selection	d. HEADING
CCRS SELECTION MODE	e. SPEED THROUGH WATER
a. AUTO	f. SPEED OVER GROUND
b. MAN	g. DEPTH
c. POSITION	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Ship

Own Ship Vector and Look-Ahead...	Acquisition/Exclusion Zones
Anchor Watch...	Man Overboard
Guard Zones	
Look-Ahead width (m)	
Vector Length (minutes)	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Logs

Current 24 Hour Log...	Manual 24 Hour Log Entry...
Manage 24 Hour Log...	Voyage Recording...

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

Help

Help Index...	
System Information...	
About...	

Raytheon Anschutz SYNOPSIS ECDIS

Key Raytheon Anschutz SYNOPSIS ECDIS Menu Functions

1.	View list of installed Charts	Chart>S57 + CM93/3 chart Chart Catalogue...
2.	View the latest update number installed	S-57 Options>Legend...
3.	Change Chart Settings	S-57 Options>Overlays>Options
4.	View information on charted objects and view additional text	Mouse cursor on an object and click on the Query button
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	S-57 Options>Overlays>Options
6.	Input a Mariner Object	S-57 Options>Add/Delete Mariners Objects...
7.	Input a Manual Update	S-57 Options>Manual Updates...
8.	Turn Free EBL/VRM on	Nav Tools>Free EBL/VRM
9.	Configure the Searchlight (Anti-grounding)	Ship>Own Ship Vector
10.	Configure Ship's Track	Logs>Voyage Recording...
11.	Configure Velocity Vectors	Ship>Own Ship Vector
12.	View Logbook	Logs>Current 24 Hour Log...
13.	Input a Visual or Radar Fix	Nav Tools>Line Of Position...
14.	Configure Guard Zone	Ship>Guard Zone...
15.	Turn on Radar Image Overlay	Toolbar>Radar Overlay

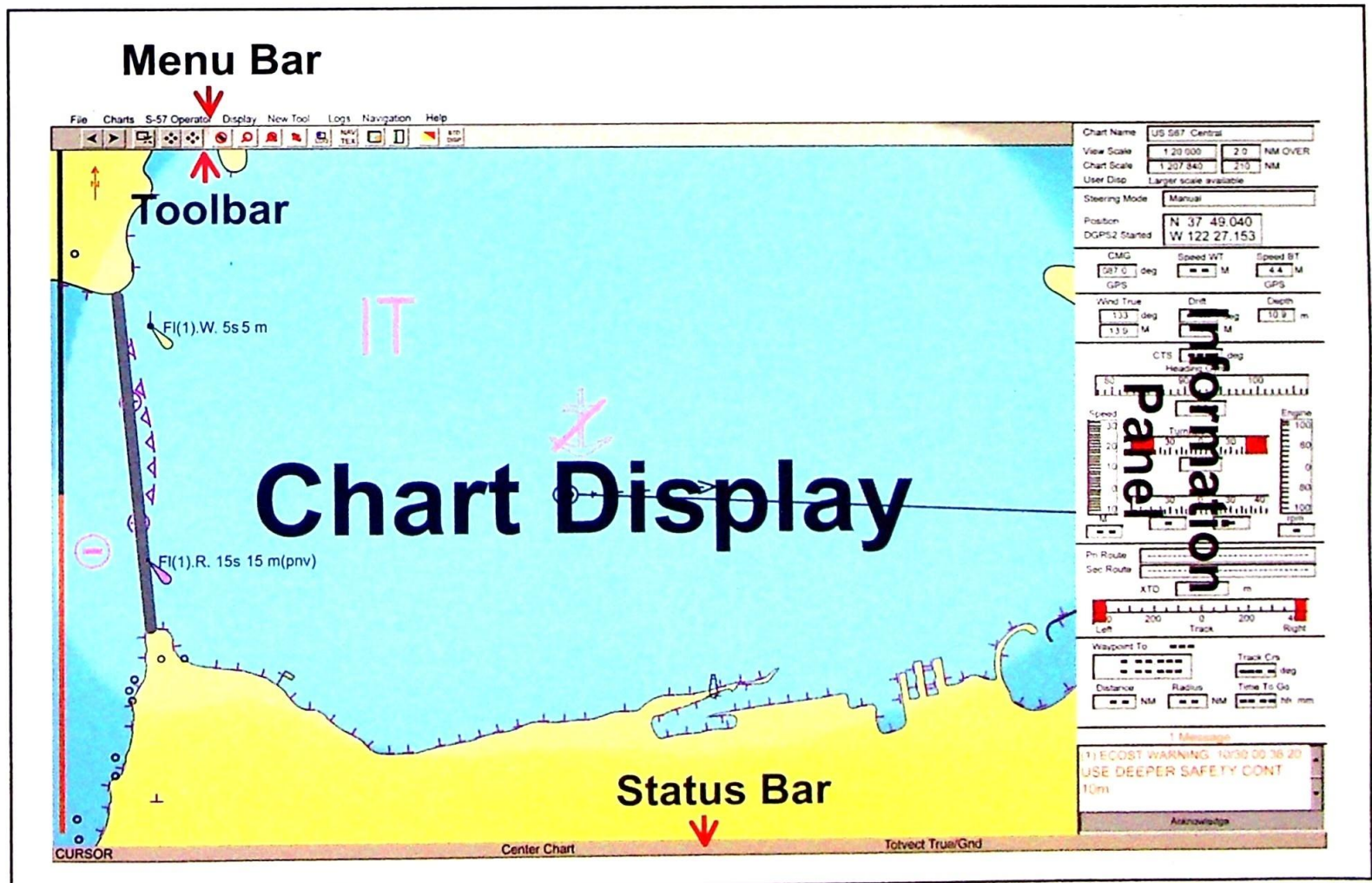


Chart Name	US S67 :Central	
View Scale	1:20 000	2.0 NM OVER
Chart Scale	1:207 840	210 NM
User Disp	Larger scale available	
Steering Mode	Manual	
Position	N 37 49.040	
DGPS2 Started	W 122 27.153	
CMG	087.0 deg	Speed WT
GPS		Speed BT
		4.4 M
Wind True	133 deg	Drift
		10.9 m
	13.9 M	
CTS	deg	
Heading Gyro	80 90 100	
Speed	092.6	Engine
Turnrate	30 0 30	
		rpm
Pri Route	-----	
Sec Route	-----	
XTD	m	
Left	0 200 0 200 40	Right
Waypoint To	-----	
Track Crs	deg	
Distance	Radius	Time To Go
----- NM	----- NM	----- hh:mm
1 Message		
(1) ECOST WARNING: 10/30 00 36 20		
USE DEEPER SAFETY CONT		
10m		
Acknowledge		

← Chart Name, View Scale, Chart Scale, Overlays

← Steering Mode, Position

← CMG, Speed WT, Speed BT

← Weather Wind, Drift, Depth

← Course to Steer

← Heading Gyro, Engine RPM, Turn Rate

← Pri Route, Sec Route

← Cross-track Error

← Waypoint To, Track Crs, Distance, Radius, Time To Go

← Waypoint To, Track Crs, Distance, Radius, Time To Go



- Previous/Next
- Free Zoom
- Zoom In/Out
- Centre On Ship
- Free EBL
- Fixed EBL
- Mark At Ship
- Manual 24 Hour Log Entries
- NAVTEX Dialog
- Toggle ARCS/S57
- Select Chart



- Select Info Panel
- MOB
- Standard Display
- Radar Overlay
- ARPA Overlay
- AIS Overlay
- Tender Tracking

14. SAM Chartplot 1100 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Basic Menu Line		
	EBL1		Std Disp
	Range/Scale Field		Brightness
	Set Centre		Tree
	VRM		Navigation Data Line
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Radar/AIS		Chart
	Targets		Rings
	Trial Manoeuvre		Predictor
	AIS		Anchor Watch
	ARPA Targets from (ON/OFF)		UKC
	AIS Targets (ON/OFF)		EBL 1/2 VRM 1/2
			Position Fixes
			Line of Positions
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart		
	Chart Settings		Visibility Options
	Type		Raster Chart Options
	Category		Chart Visible (ON/OFF)
	Depth Contour		Accuracy Symbols
	Ignore Scale Minimum (ON/OFF)		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Tracks		
	Load		Delete
	Set system Track		Waypoint File
	Cancel system Track		
	Time Schedule	Pilot	TRACKPILOT
	Select To-WPT	Peripheral Devices	
	Clear		Printer
	Edit		Digitizer
			Activate Schedule...

SAM Chartplot 1100 – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Chart		Position Fixes	
	Presentation		Position Fixes
	Coordinate System		Drop Position Fix
	Display Mode		Time Remark
	Display Settings		Show in Chart
	Bearing Scale (ON/OFF)		Delete
	Grid	Line of Position	
	Range Rings		LOP1
	Vector Length (min) (ON/OFF)		LOP2
	Own Ship		LOP3
	Past Position (min) (ON/OFF)		

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Chart	
	Edit Manual ENC Updates
	Events
	Edit User Chart Objects

8. System/Local Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensor Settings			
	System Sensors		2nd Position Sensor
	Set Gyro		Speed Sensor
	Position Sensor		Date/Time

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alarms Settings			
	Chart Alarms		TCPA
	Buzzer On (ON/OFF)		Auto AIS Target Acq (ON/OFF)
	Track Alarms		Depth Alarm (ON/OFF)
	CPA		Anchor Watch Area (ON/OFF)
	Ahead Sector Width		

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Utilities			
	Backup/Restore		Version...
	Text Pages		EXIT
	Docking		
	Keel Clearance		POWER DOWN
	Pilot Card		
	Calculator		CANCEL
	Voyage Recording		
	System Maintenance		

11. ECDIS Operator's Manual

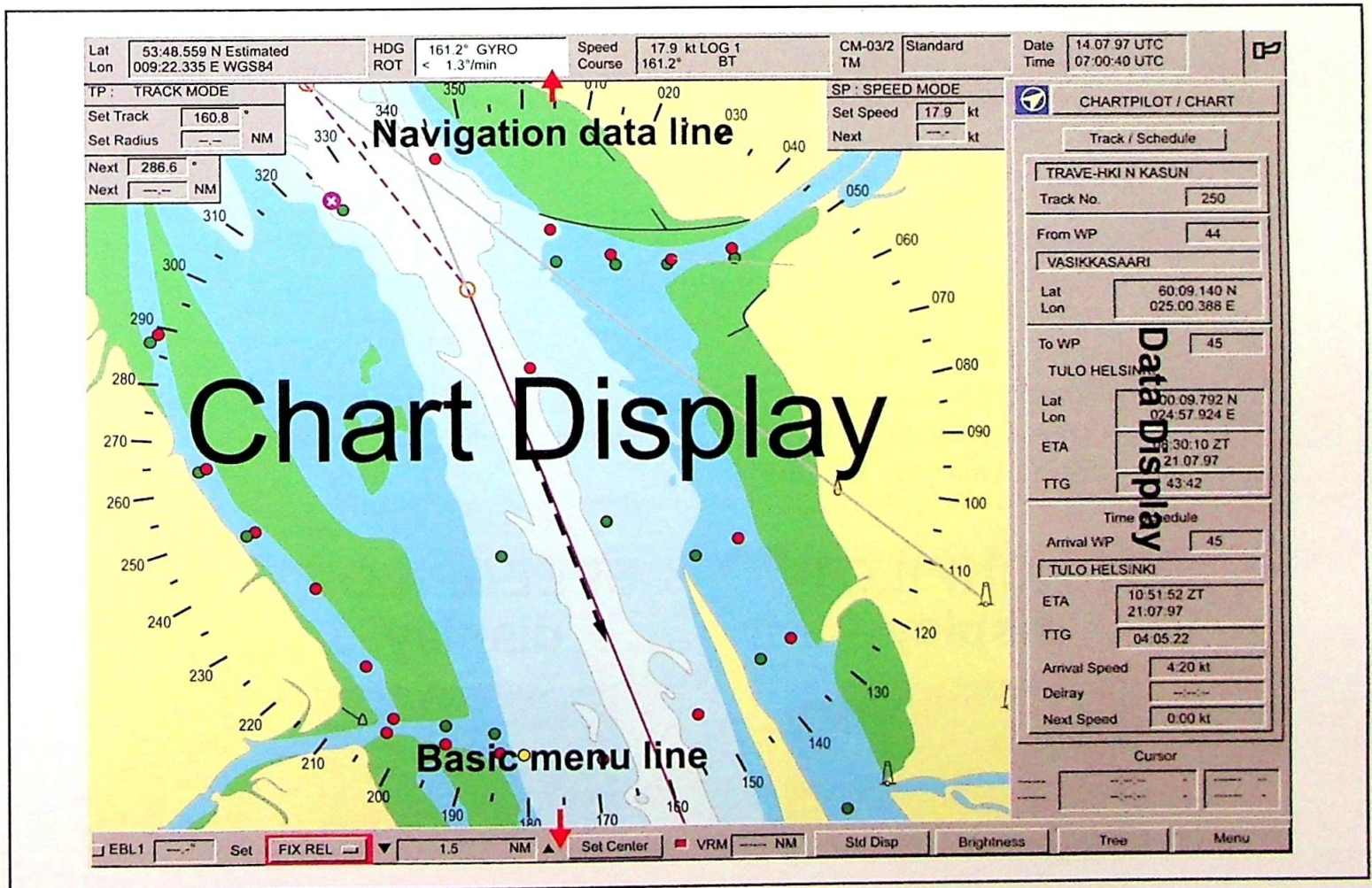
Locate the system's operator's user guide for referencing and help.

Status Bar	
	Manual

SAM Chartplot 1100

Key SAM Chartplot 1100 ECDIS Menu Functions

1.	View list of installed Charts	Menu>Chart>Utilities>Chart Maintenance
2.	View the latest update number installed	Position Cursor in chart area>INFO>Legend
3.	Change Chart Settings	Menu>Chart>Visibility Groups
4.	View information on charted objects and view additional text	Position Cursor in chart area>INFO>Chart Contents
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Menu>Chart>Depth Contour
6.	Input a Mariner Object	Menu>Chart>Mariner Objects
7.	Input a Manual Update	Menu>Chart>ENC>Edit Manual ENC Updates
8.	Turn EBL/VRM on	Basic Menu Line>Select EBL1
9.	Configure the Ahead Sector (Anti-grounding)	Menu>Alarm Settings>Chart Alarms
10.	Configure Ship's Track	Menu>Conning>Docking
11.	Configure Velocity Vectors	Menu>Chart>Presentation
12.	View Logbook	Menu>Chart>Utilities>Voyage Recording
13.	Input a Visual or Radar Fix	Menu>Chart>Lines of Position
14.	Configure Radar Image	Menu>Info>Radar Image
15.	View Alarm List	Navigation Data Line>Horn symbol



Navigation data line

	A	B	C
Lat	57:46.266 N Estimated	GyroHDG	314.1°
Lon	018:41.921 E WGS84 Radar	ROT	> 1.0°/min
		Speed	20.9 kt LOG 1
		Course	314.1° BT
	C-MAP	Standard	Date
	TM/TRUE		07.10.97 ZT
			Time
			13:43:40 ZT
	D	E	F
			G

- A – Own Position
- B – Compass Course, Rate of Turn
- C – SMG and COG
- D – Selected Chart Type/Display Mode/Display of the Vectors
- E – Status Field
- F – Zone Time, Time Zone
- G – Alarm List ON/OFF

Basic menu line

A	B	C
EBL1	45.0°	Set
	FIX REL	▼
	6 1 NM	▲
		Set Center
VRM	2.00 NM	Std Disp
		Brightness
		Tree
		Menu
D	E	F
		G
		H

- A – EBL1 Options
- B – Scale Selection
- C – Specifying the Centre of the Chart
- D – VRM1 Options
- E – IMO Standard Display
- F – Brightness Control
- G – Tree Overview of the Top Two Menu Levels
- H – Menu Display ON/OFF

TRACKPILOT display

TP : HEADING MODE	
Set Heading	59.3 °
Set Radius	2.00 NM
Next	---.- °
	---.- NM

SPEEDPILOT display

SP : SPEED MODE	
Set Speed	14.6 kt
Next	---.- kt

15. SIMRAD Maris ECDIS 900 – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Toolbar panel		
	Man over board		Standard Display
	Event		Select Area
	Zoom in		Auto centering
	Zoom out		Centre on Ship
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Tools		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart settings		
	ENC settings		Special Effects
	Supplementary Layers		Properties
	Chart Depths		Full light length (ON/OFF)
	Highlight date dependent		Safety contour
	Admiralty Information Overlay		Disable SCAMIN impact (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Route		
	Ship Profiles		Route Plan
	New route		Load/Unload objects
	SAR		Expanding square
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.		
	Ship properties		Show ports – Left click
	Show/Hide Tide stations and ocean current – Left click		Port list – Right click
	Tide stations – Right click		Options
	Weather handling		Draught (m)
7.	Chart Updating The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.		
	Chart handling		
	ENC		Set Test Mode
	RNC		ENC Status Report
	Security		Close
	Install		Cancel
	Update		Chart 1
	History of updates		
8.	System Sensors Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.		
	Sensor Selection/Status		Position Status
	Date/Time Settings		
	Time zone		

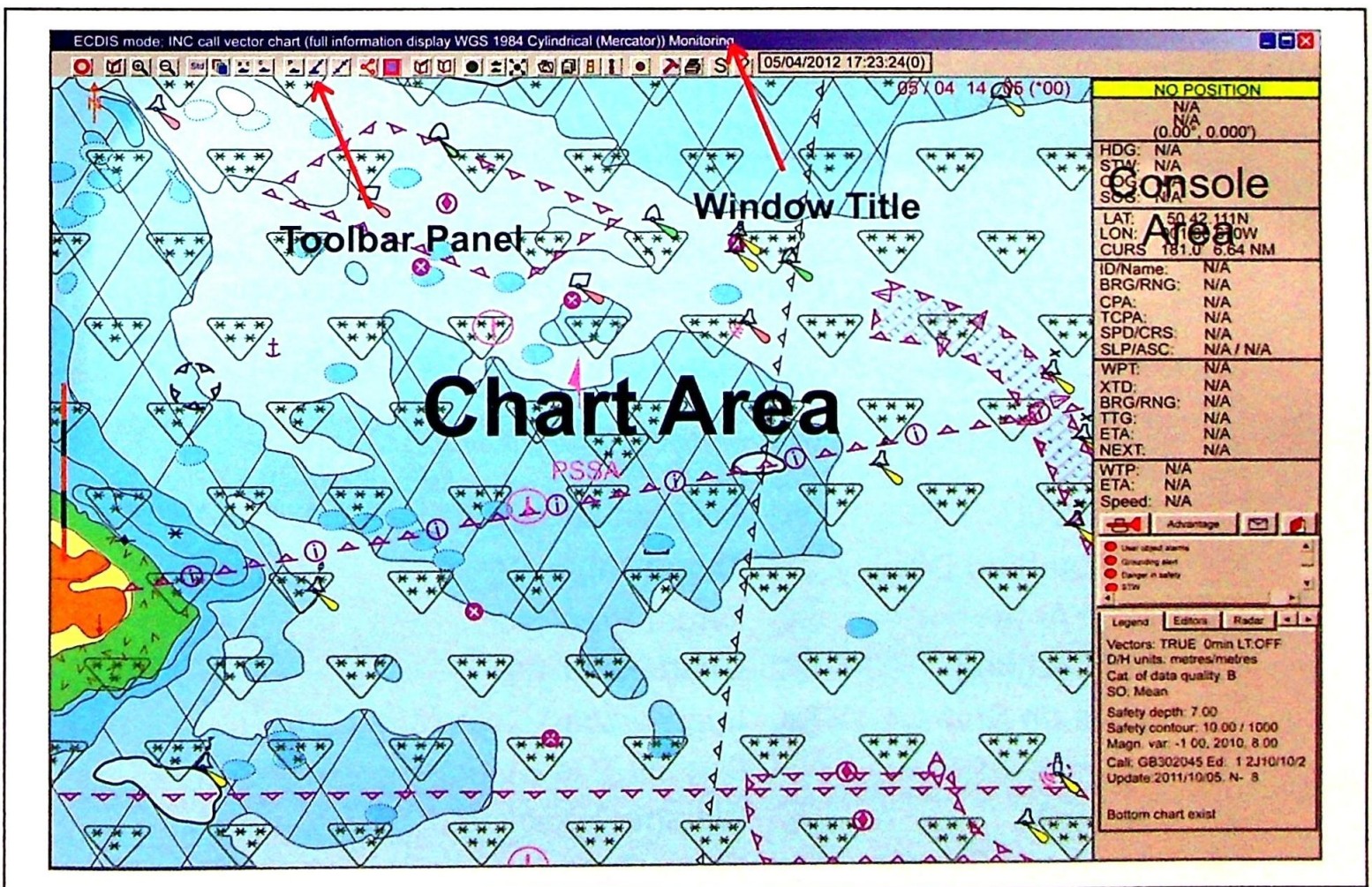
SIMRAD Maris ECDIS 900 – Familiarisation Checklist (Page 2 of 2)

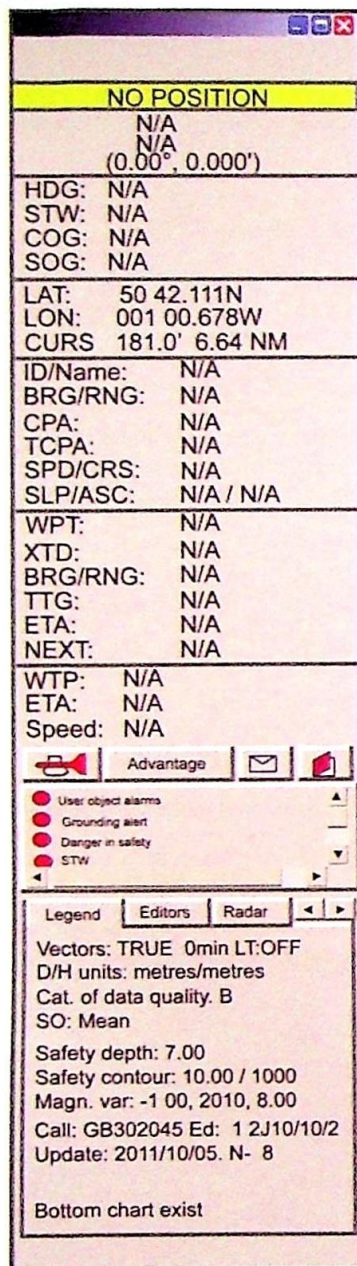
9.	System Alerts Identify the ECDIS system’s category of Alarms and Prompts generated by the operator and by the ECDIS system.	
	Alerts	
	Guard Zone	Route alarms
	Target alarms	Position monitoring threshold
	Check safety zone and anchorage zone (ON/OFF)	TCS course change style
	Display and highlight dangers	
10.	System Units Become familiar with the system’s logbook, records, data storage and configuration set up.	
	Main	
	Backup	Logbook
	New logbook record	
11.	ECDIS Operator’s Manual Locate the system’s operator’s user guide for referencing and help.	
	Toolbar panel	
	Help	

SIMRAD Maris ECDIS 900

Key SIMRAD Maris ECDIS 900 ECDIS Menu Functions

1.	Selection of additional side panels	Toolbar>Options>Console>Console Configuration>Custom
2.	Configuration of Ship's Parameters (Length, Breadth, Draught, etc.)	Ship Properties>General
3.	View Installed Charts (all formats)	Chart Handling>ENC, C-Map or ARCS
4.	View the latest update number installed	Chart Handling or Chart Properties
5.	View ENC Chart Updates	Chart Handling>Display Updates
6.	View information on charted objects and view additional text	Context Menu>Chart Priorities
7.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Context Menu>Chart Settings>Technical>Depths
8.	Input a User Chart Object	Object Editor>Navigation Editor or User Data Editor
9.	Input a Manual Update	Context Menu>Manual Update
10.	Turn the ship outline on	Ship Properties>Display>Scaled Icon
11.	Configure the Check Safety Zone (Anti-grounding Cone)	Ship Properties>Guard Zone>Check Safety Zone
12.	Configure Velocity Vectors	Ship Properties>Alarms>Display
13.	Manually change the active WPT	Right click on a WPT and select 'Activate'
14.	View past Alarms and Warnings	In the Logbook (Logbook icon) but only if recording is ON
15.	Input a Visual or Radar Fix	Object Editor>Navigation Editor>LOP





- ← GPS Indicator
- ← Position Offset
- ← HDG, STW, COG, SOG
- ← Cursor Position
- ← Target Panel
- ← Active Waypoint Information
- ← Waypoint ETA Information
- ← Alarm Display
- ← Legend Panel

The Console Area can be customised by the user and therefore panels may differ from that shown above.

- | | | | | | |
|--|----------------------|--|-----------------------|--|----------------|
| | Man Overboard | | Route Plan | | Print |
| | Event | | Logbook Entry | | Sensor Monitor |
| | Zoom In | | Logbook | | Version |
| | Zoom Out | | Set Manual Target | | |
| | Set Standard Display | | Target Table | | |
| | Select Area | | Target Prediction | | |
| | Auto Centring | | Chart Handling | | |
| | Centre on Ship | | Load/Unload Objects | | |
| | Ship Properties | | Display Tide Stations | | |
| | EBL/VRM | | Weather Handling | | |
| | Range and Bearing | | Show Ports | | |
| | New Route | | Options | | |

16. Sperry VisionMaster FT – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display Become familiar with the basic chart functionality from the main display.	
	Main Chart Panel	
	Upper tool bar – shortcut menu options	Show Menu – Main Menu
	Lower tool bar – shortcut menu options	Context Menu – Right click
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
	Nav Tools	
	Parallel Index Lines	Distance Line
	Clearing Lines	Display Settings
	Lines of Position	Ownship Vector (ON/OFF)
	Ownship History	Anchoring
	Display Events (ON/OFF)	Anchoring Feature (ON/OFF)
	Parallel Cursor	Man Overboard
	Trial Manoeuvre (ON/OFF)	
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
	Charts	
	Charts Tools	Chart Databases
	Show Summary	Allow Automatic Database Selection (ON/OFF)
	Export S-63 User Permit	Chart Legend
	Chart Settings	Manual Chart Updates
	Spot soundings (ON/OFF)	Chart Query
	Scale min (ON/OFF)	Chart Dangers
	Chart Projections	Navigational Hazards (ON/OFF)
	Accuracy (ON/OFF)	Chart 1
	Chart Depths/heights	Chart Symbols
	Safety Contour	Brightness Check
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.	
	Routes	
	Monitor Route	Temp Route
	ETA Calculator	Search and Rescue
	Route ETA	Route Status
	Required Speed	Route Import/Export
	Speed Planning	Route Display Settings
	Edit Route	Show Wheel over labels (ON/OFF)
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.	
	Routes	
	Monitor Route	Temp Route
	ETA Calculator	Search and Rescue
	Route ETA	Rout Status
	Required Speed	Route Display Settings
	Speed Planning	Show Critical Points (ON/OFF)

Sperry VisionMaster FT – Familiarisation Checklist (Page 2 of 2)

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Charts

Chart Tools	Chart Installation
Chart Match	Permissions/User Permits
Chart Updates Summary	Chart Index

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensors

Heading	Depth Below Keel
STW	Set and Drift
COG	Rate of Turn
SOG	Date and Time
Position	Wind
Offset Applied (ON/OFF)	

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Alarms

Alarms	Look Ahead
Prompts	Mute Settings
Chart Dangers	
Show Safety Region (ON/OFF)	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

System

User Profiles	Commissioning
Options	Time Management
Diagnostics	Shutdown

11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

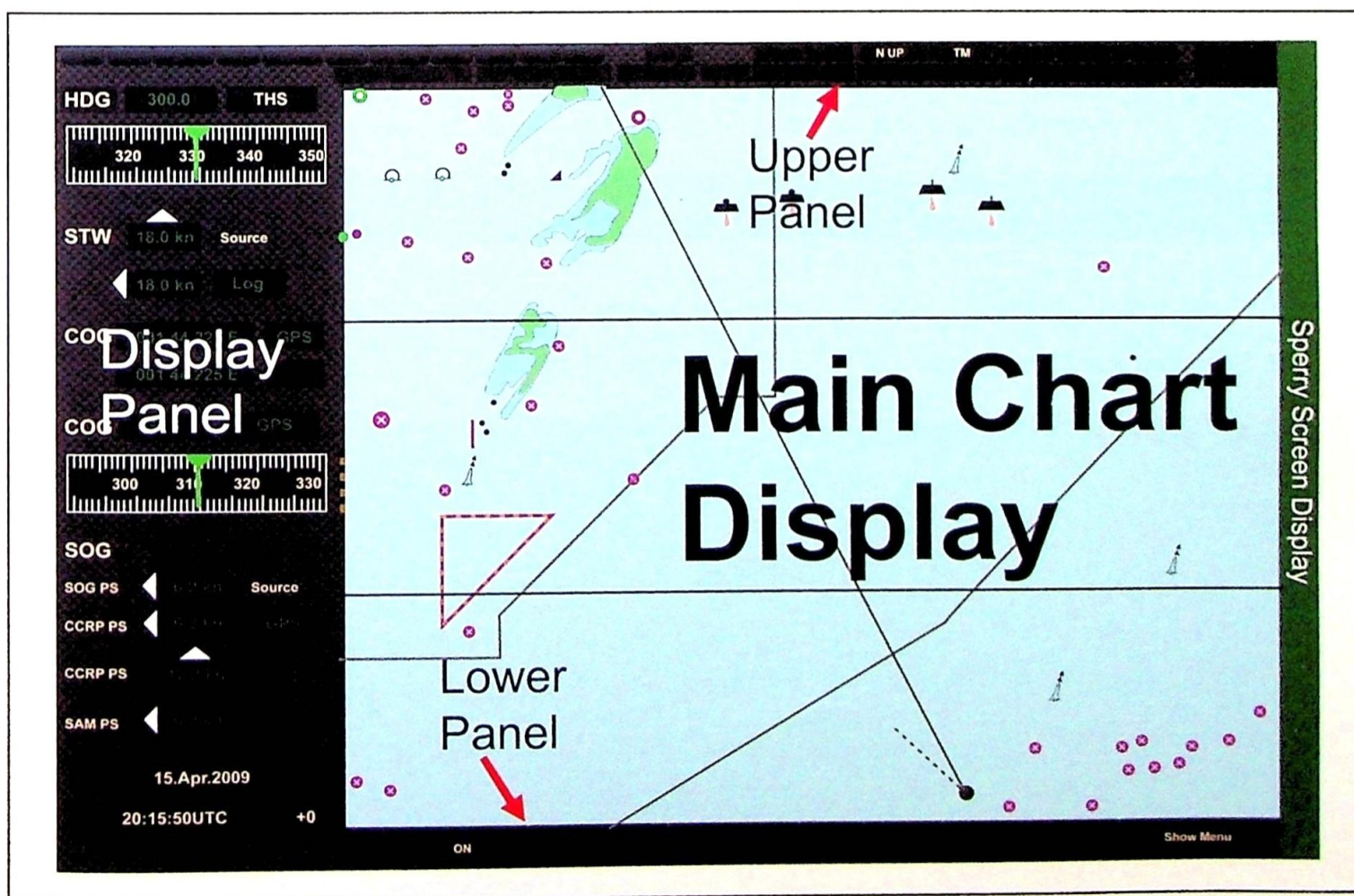
Help

Help

Sperry VisionMaster FT

Key Sperry VisionMaster FT ECDIS Menu Functions

1.	View Ship's Length, Beam, Maximum Speed and ROT	Show Menu>System>Commissioning>Characteristics
2.	View list of installed Charts	Show Menu>Charts>Chart Tools>Show Index
3.	View the latest update number installed	Show Menu>Charts>Chart Legend>Updates
4.	Change Chart Settings	Upper Toolbar>Presentation Mode
5.	View information on charted objects and view additional text	Context Menu>Query Chart
6.	Set the Safety Depth, Safety Height, Shallow and Deep Contour	Show Menu>Charts>Chart Depths/Heights
7.	Show/Hide Manual Update Layers	Show Menu>Charts>Manual Chart Update>Layers
8.	Input a Manual Update	Show Menu>Charts>Manual Chart Update>Edit
9.	Turn the Predictor on	Show Menu>Nav Tools>Display Settings
10.	Configure the Look-Ahead	Show Menu>Charts>Chart Dangers
11.	Configure Ship's Track	Show Menu>Nav Tools>Own Ship History
12.	Configure Velocity Vectors	Show Menu>Nav Tools>Display Settings
13.	View System Logs	Show Menu>System>Diagnostics>Data Log>View Data Log
14.	Input a Visual or Radar Fix	Show Menu>Nav Tools>Line of Position
15.	Input of Temporary Route	Show Menu>Route>Temp Route



Sperry Screen Display

Upper Toolbar



- | | |
|--|--|
| <p>1: Sensoring Books</p> <p>2: AIS Messages</p> <p>3: Target Display Menu</p> <p>4: AIS Display Menu</p> <p>5: True Relative Vector</p> <p>6: Length of Displayed Vectors</p> <p>7: ENS</p> <p>8: Select/Edit Route</p> <p>9: North Up/Course Up</p> <p>10: True Motion Indicator</p> | <p>11: Change Range/Scale</p> <p>12: Warnings</p> <p>13: Operator Indications</p> <p>14: Turn Buzzer ON/OFF</p> <p>15: Dangers</p> <p>16: Man Overboard</p> <p>17: Change Watch Mode</p> |
|--|--|

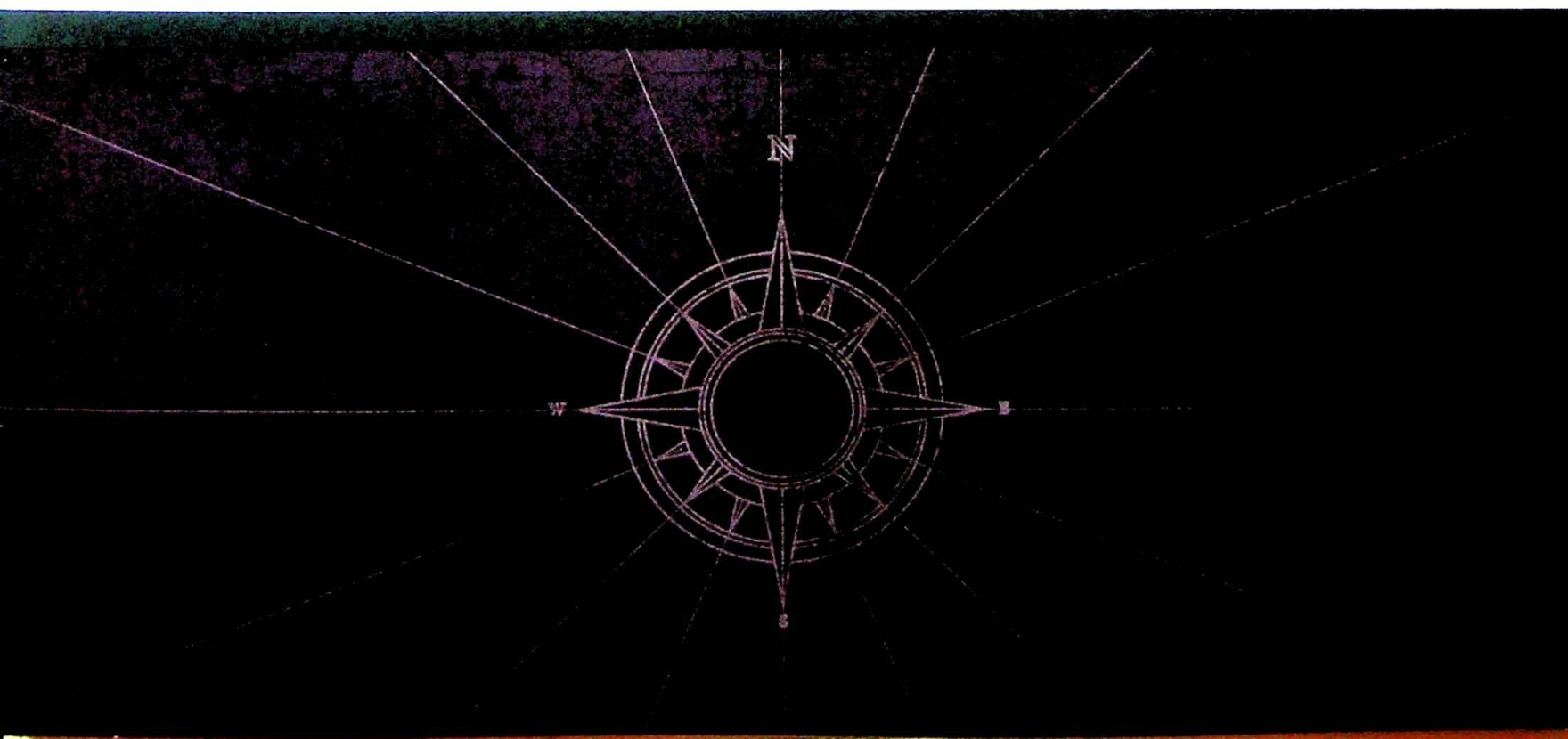
Lower Toolbar



- | | | |
|---|---|---|
| <p>1: Current Ship Position</p> <p>2: Selected Position Sensor</p> <p>3: Dead Reckoning</p> <p>4: Position Status Menu</p> <p>5: Cursor Status Menu</p> <p>6: Time Management Menu</p> <p>7: Basic Display</p> <p>8: Range Rings ON/OFF</p> <p>9: ERBL Display</p> <p>10: Brilliance Menu</p> | <p>11: Hide Menu</p> <p>12: Maximum Chart View</p> <p>13: Centre Own Ship</p> <p>14: Show Single Chart</p> <p>15: Secondary Display Button</p> <p>16: Standard Chart Display</p> <p>17: Chart Query Display</p> <p>18: Apply/Edit User Profiles</p> <p>19: Goto Menu</p> <p>20: Conning Information Pages</p> | <p>21: Version Number</p> <p>22: Help Menu</p> <p>23: Show Menu</p> |
|---|---|---|

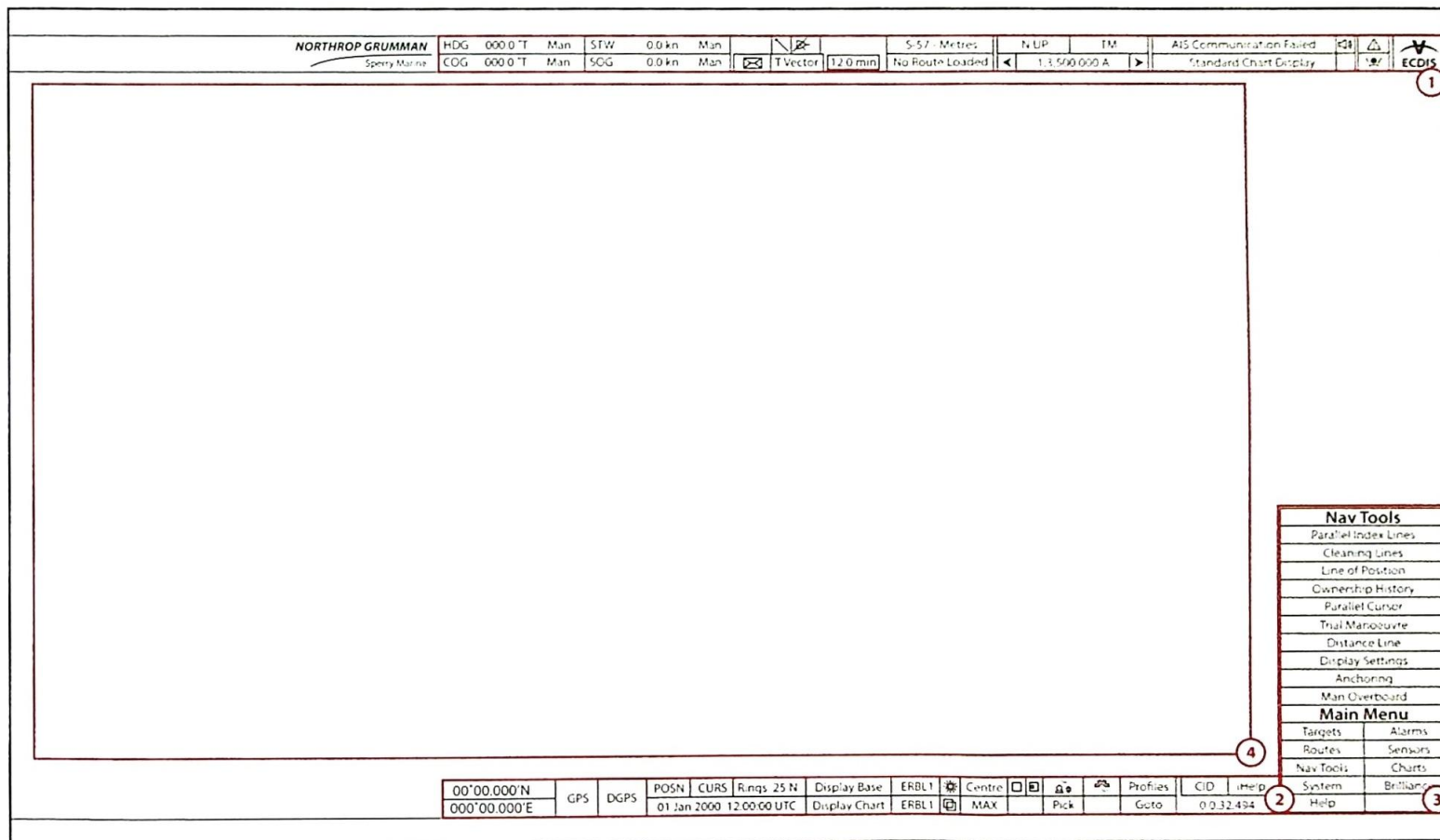
Sperry VisionMaster FT

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Section 1: Main Display

1.1 Screen Layout



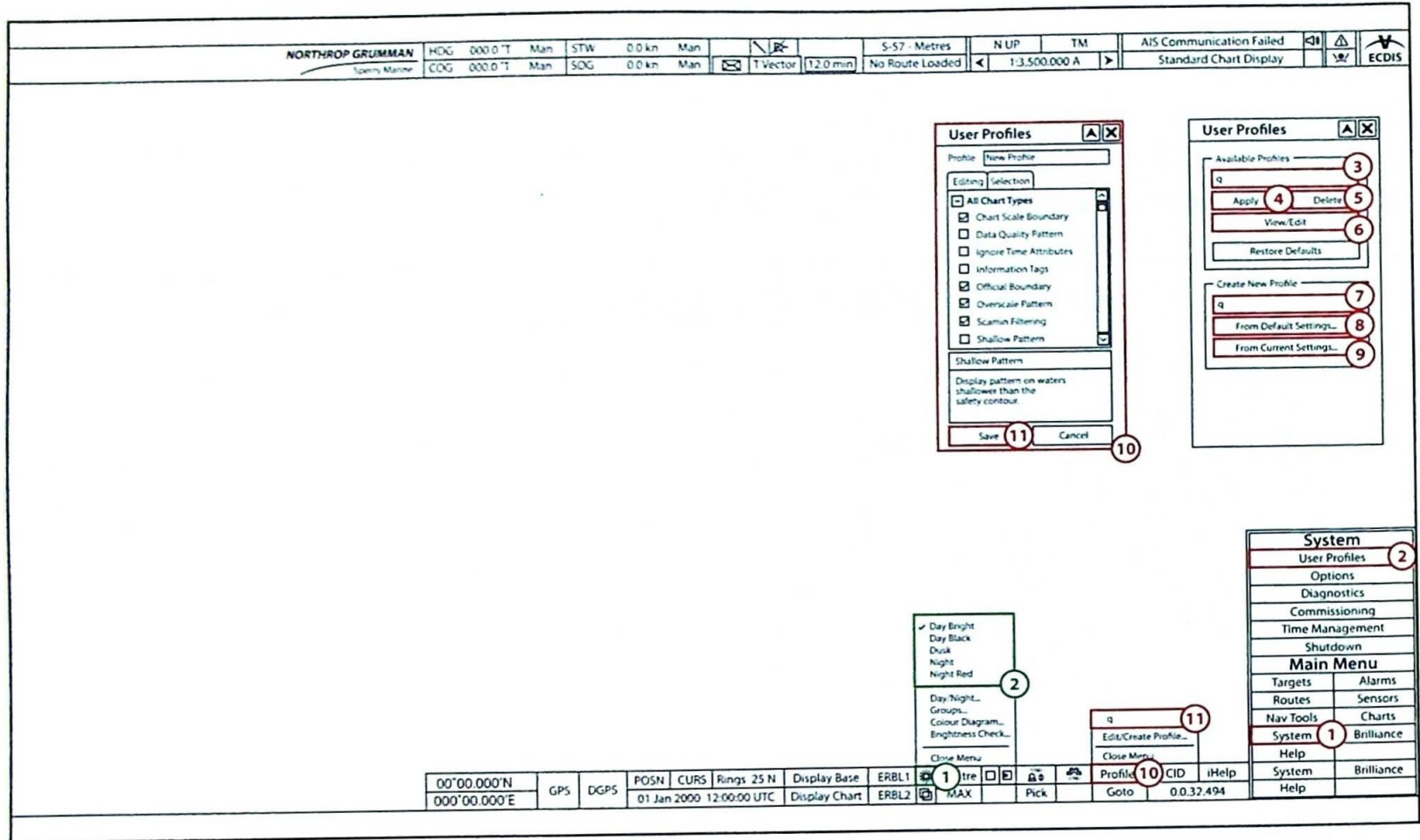
1 Upper toolbar

3 Main menu

2 Lower toolbar

4 Main chart panel

1.2 Colour Palette/Profiles



- 1 Select 'System' from the main menu.
- 2 Click 'User Profiles'.
- 3 Select a user profile from the dropdown menu.
- 4 Click 'Apply' to select/enable the profile.
- 5 Click 'Delete' to delete the profile.
- 6 Click 'View/Edit' to edit selected profile.

- 7 Enter a name to create a new user profile.
- 8 Select 'From Default Settings'.
- 9 Alternatively, select 'From Current Settings'.
- 10 'User Profiles' editing window is displayed.
- 11 Click 'Save' to create your new profile.

- 1 Click the symbol that looks like a sun.
- 2 Select a colour palette from the options available.

1.3 Range/Scale/Motion

The screenshot displays the ECDIS interface with the following elements:

- Top Status Bar:** Vessel name: NORTHROP GRUMMAN; HDG: 000.0 T; Man; STW: 0.0 m; Man; SOG: 0.0 kn; Man; T Vector: 12.0 min; No Route Loaded; 5.57 Metres; N UP; TM; AIS Communication Failed; Standard Chart Display; ECDIS logo.
- TM Menu (Circled 1, 3, 4):**
 - TM
 - Show TM Limits
 - Reset TM Limits
 - Set TM Limits
 - Close Menu
- Zoom Window (Circled 2):**
 - Auto Scale
 - Manual Scale
 - Zoom Window
 - 1,500
 - 1,100,000
 - 1,150,000
 - 1,200,000
 - 1,300,000
 - 1,400,000
 - 1,500,000
 - 1,800,000
 - 1,10,000
 - 1,15,000
 - 1,20,000
 - 1,30,000
 - 1,40,000
 - 1,50,000
 - 1,80,000
 - 1,100,000
 - 1,110,000
 - 1,200,000
 - 1,300,000
 - 1,500,000
 - 1,100,000
 - 1,800,000
 - 1,1,000,000
 - 1,2,000,000
 - 1,3,000,000
 - 1,1,500,000 Completion Scale
 - 1,5,000,000
 - 1,8,000,000
 - 1,10,000,000
 - 1,20,000,000
- System Menu (Bottom Right):**
 - System
 - User Profiles
 - Options
 - Diagnostics
 - Commissioning
 - Time Management
 - Shutdown
 - Main Menu
 - Targets
 - Alarms
 - Routes
 - Sensors
 - Nav Tools
 - Charts
 - System
 - Brilliance
 - Help
 - System
 - Brilliance
 - Help
- Bottom Status Bar:**
 - 00°00.000'N
 - 000°00.000'E
 - GPS
 - DGPS
 - POSN
 - CURS
 - Rings: 25 N
 - Display Base
 - ERBL1
 - Centre
 - ERBL2
 - MAX
 - Pick
 - Profiles
 - CID
 - Help
 - 0.0.32.494

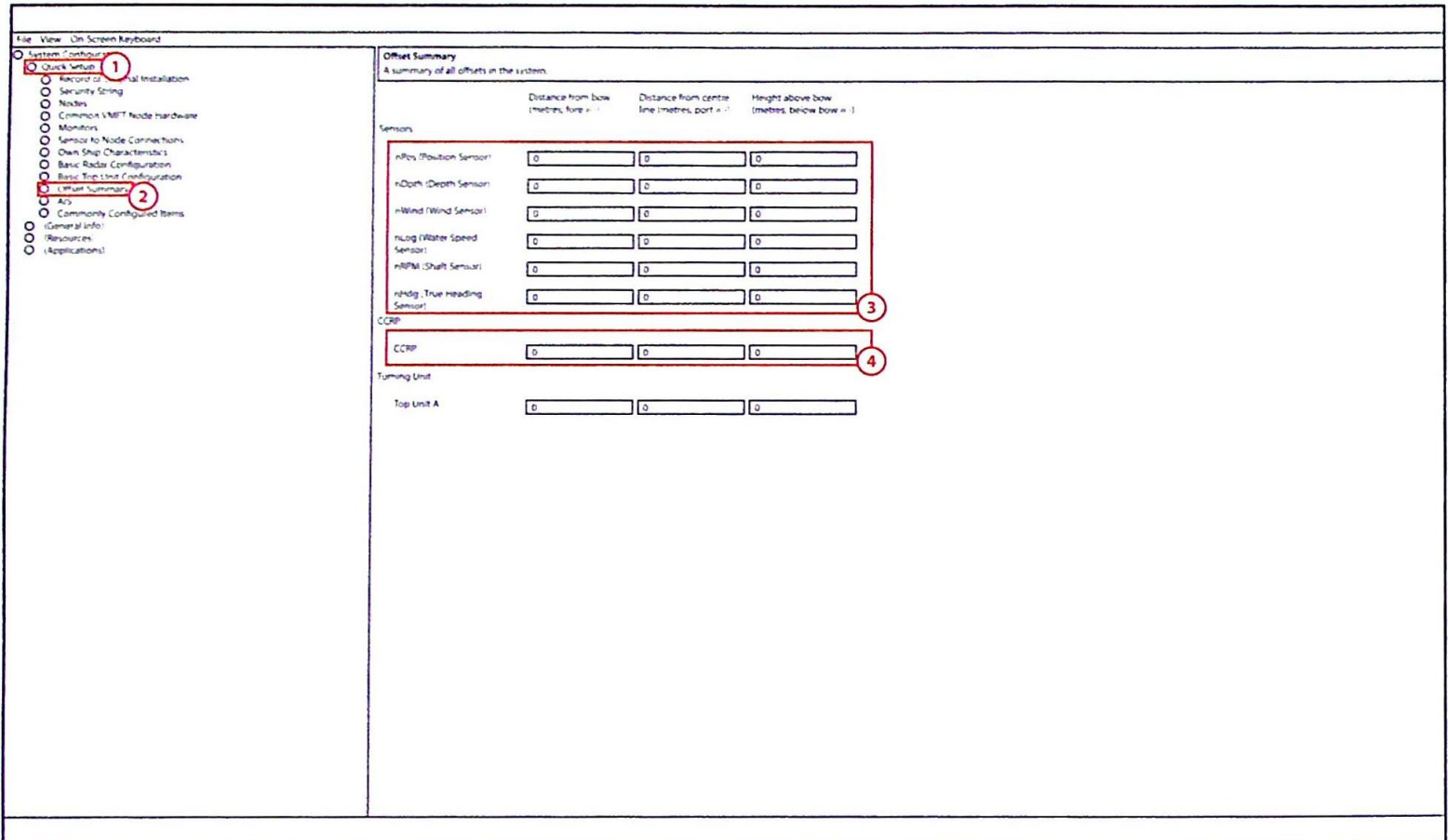
1 Left or right click on the scale button.

3 Right click on the 'TM' button.

2 Select a scale from the dropdown list.

4 Select an option from the list to edit TM settings.

1.4 Setting CCRP



Note to user: Viewing CCRP settings requires access to the system configurator.

1 Ensure the system configurator has been opened and click 'Quick Setup'.

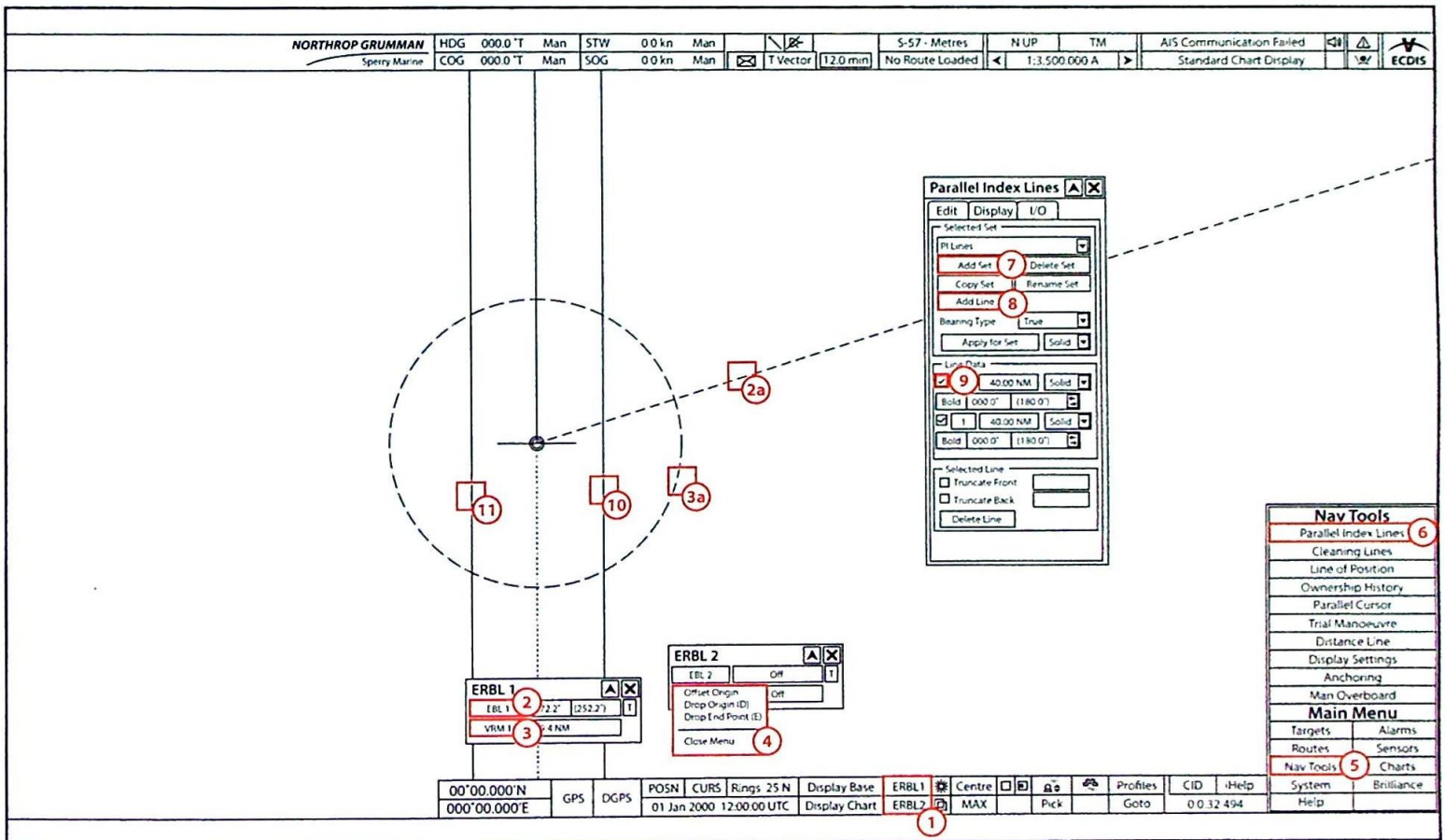
2 Click 'Offset Summary'.

3 Configure sensor offsets.

4 Configure CCRP setting.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



- 1** Left click to open the 'ERBL1' or 'ERBL2' menu.
- 2** Click on 'EBL1' to enable the electronic bearing line.
 - a** Example of EBL line.
- 3** Click on 'VRM1' to enable the variable range marker.
 - a** Example of VRM marker.
- 4** Right click on EBL or VRM buttons to offset.
- 5** Click on 'Nav Tools'.
- 6** Click on 'Parallel Index Lines'.
- 7** Click 'Add Set', then enter a name.
- 8** Click 'Add Line'. (Up to 15 PI lines can be created.)
- 9** Ensure the lines are shown by clicking the tick box.
- 10** Example PI line 1.
- 11** Example PI line 2.

2.2 Manual Chart Update

- 1 Open 'Manual Chart Update' from the main menu.
- 2 Select the 'Layers' tab.
- 3 Insert a layer name.
- 4 Click 'Add New Layer'.
- 5 'New Layer' is shown in the list above.
- 6 Select the 'Edit' tab.
- 7 Click 'Create New Object'.
- 8 Select your 'New Layer' from the dropdown list.
- 9 Select object type.
- 10 Select 'Symbol/Description'.
- 11 'MO EDIT' cursor will be displayed.
- 12 Left click to place your object.
- 13 Click 'Done' to finish.

2.3 Chart Updates

The screenshot shows the Sperry Chart Installer application. At the top, there is a status bar with various navigation and system parameters. The main window is titled 'Sperry Chart Installer' and contains several sections:

- Operation Type:** Includes options for 'Install/Update/License Charts' (selected) and 'Delete Chart Database', and 'Index Chart Database'.
- Chart Format:** Includes options for 'S-57 (unencrypted)' (selected), 'DirectENC', 'DirectNC', 'VPP', and 'ARCS'. Callout 3 points to 'S-63'.
- Chart Tools (Sidebar):** Callout 1 points to this sidebar, which includes 'Chart Updates Summary', 'Chart Installation', 'Permissions / User Permits', and 'Charts'.
- Charts List:** A table showing chart names and expiration dates. Callout 1 also points to this section.
- Buttons:** Callout 2 points to the 'Chart Installer' button, callout 4 to the 'Next >>' button, callout 5 to another 'Next >>' button, callout 6 to the 'Run ChartHandler' button, callout 7 to the 'View Importable S-57/S-63 Charts' button, callout 8 to the 'Browse' button, and callout 9 to the 'Install Charts' button.

At the bottom of the window, there is a status bar with coordinates (00°00.000'N, 000°00.000'E), GPS/DGPS status, POSN (01 Jan 2000), CURS (12:00:00 UTC), Display Base (Display Chart), ERBL1/2 (MAX), Centre (Pick), Profiles, CID (0.0 32.494), and iHelp.

- 1 Open 'Chart Tools'.
- 2 Click on 'Chart Installer'.
- 3 Select 'S-63'.
- 4 Click 'Next >>'.

- 5 Click 'Next >>' again.
- 6 Click 'Run ChartHandler'.
- 7 Select 'View Importable S-57/S-63 Charts'.

- 8 Open 'Browse' and select your installation media.
- 9 Click 'Install Charts'.

2.4 No Go Areas/User Charts

The screenshot displays the ECDIS interface with the 'Manual Chart Update' dialog box open. The dialog has two tabs: 'Chart Update Creation' and 'Chart Update View/Edit'. The 'Chart Update Creation' tab shows options for creating a new object, including selecting a layer, type, and symbol description. The 'Chart Update View/Edit' tab shows options for editing an existing object, including selecting a layer, type, and symbol description. The chart display shows a polygon and a circle, with a 'MO EDIT' cursor visible. A 'Charts' menu is visible on the right side of the interface.

- 1 Open 'Manual Chart Update' from the main menu.
- 2 Select the 'Layers' tab.
- 3 Insert a 'Layer Name'.
- 4 Click 'Add New Layer'.
- 5 'New Layer' is displayed in the list above.
- 6 Select 'Edit' tab.

- 7 Click 'Create New Object'.
- 8 Select your 'New Layer' from the dropdown list.
- 9 Select object type.
- 10 Select the circle within 'Symbol/Description'.
- 11 'MO EDIT' cursor will be displayed.

- 12 Left click to place your object.
- 13 Adjust the radius to change size.
- 14 Click 'Done' to finish.
- 15 Example 'Polygon' menu.
- 16 Example 'Polygon' object.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour

The screenshot shows the ECDIS interface with the following elements:

- Top Status Bar:**
 - Ship Name: NORTHROP GRUMMAN
 - Company: Sperry Marine
 - HDG: 000.0 T
 - COG: 000.0 T
 - Man: Man
 - STW: 0.0 kn
 - SOG: 0.0 kn
 - Man: Man
 - T Vector: 12.0 mn
 - S-57 - Metres
 - No Route Loaded
 - N UP
 - TM
 - AIS Communication Failed
 - Standard Chart Display
 - ECDIS
- Chart Depths / Heights Menu:**
 - Ship Safety
 - Safety Depth: 20 ft (3)
 - Safety Contour: 20 ft (4)
 - Safety Height: 50 m (5)
 - Shallow / Deep Shading
 - Shallow Contour: 7 ft (6)
 - Deep Contour: 20 ft (7)
- Charts Menu:**
 - Chart Tools
 - Chart Settings
 - Chart Projections
 - Chart Depths / Height (2)
 - Chart Databases
 - Chart Legend
 - Manual Chart Update
 - Chart Query
 - Chart Dangers
 - Chart 1
- Main Menu:**
 - Targets
 - Alarms
 - Routes
 - Sensors
 - Nav Tools
 - Charts (1)
 - System
 - Brilliance
 - Help
- Bottom Status Bar:**
 - 00°00.000'N
 - 000°00.000'E
 - GPS
 - DGPS
 - POSN
 - CURS
 - Rings 2S N
 - Display Base
 - ERBL1
 - Centre
 - ERBL2
 - MAX
 - Pick
 - Goto
 - Profiles
 - CID
 - iHelp
 - 0.0.32.494

1 Click 'Charts'.

2 Open the 'Chart Depths/Heights' menu.

3 Adjust 'Safety Depth'.

4 Adjust 'Safety Contour'.

5 Adjust 'Safety Height'.

6 Adjust 'Shallow Contour'.

7 Adjust 'Deep Contour'.

3.2 Display Preference Options

The screenshot shows the ECDIS interface with the 'Layers' panel open. The 'Symbology' tab is selected, and the 'ENC' option is expanded. The 'Charts' menu is visible on the right side of the screen.

Layers	
Select	All None Default
<input type="checkbox"/> ARCS	Off-Screen Chart Policy Load Best Scale Chart
<input type="checkbox"/> C-Map	Coverage boundaries Lights sector areas None
<input type="checkbox"/> SevensCs	T&P NMs
<input type="checkbox"/> ENC	Accuracy Full light lines Highlight information Highlight document Scale min Shallow pattern Shallow water dangers Contour label Four shades National language
Off-Screen Chart Policy Defines what action the system will take when the currently selected ARCS chart goes off-screen	

Charts	
Chart Tools	
Chart Settings	
Chart Projections	
Chart Depths / Heights	
Chart Databases	
Chart Legend	
Manual Chart Update	
Chart Query	
Chart Dangers	
Chart 1	
Main Menu	
Targets	Alarms
Routes	Sensors
Nav Tools	Charts
System	Brilliance
Help	

- 1 Click 'Charts'.
- 2 Open 'Chart Settings'.
- 3 Select 'Symbology' tab.

- 4 Expand the 'ENC' option by pressing the '+' symbol.
- 5 Select or deselect options, as required.

3.3 Display Configuration

The screenshot shows the ECDIS interface with the following elements:

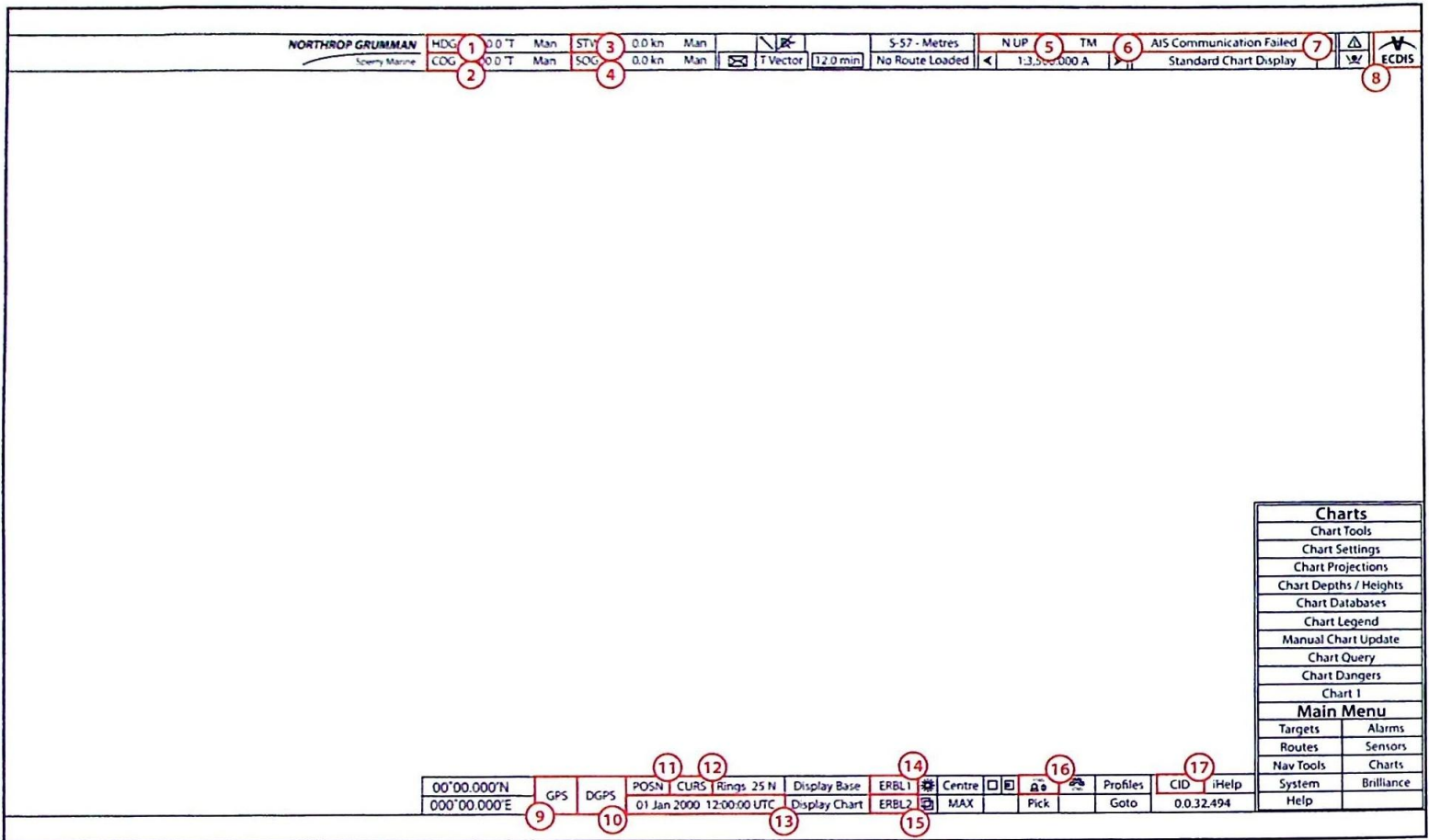
- Top Status Bar:**
 - Ship: NORTHROP GRUMMAN (Sperry Marine)
 - Navigation: HDG 000.0 T Man, STW 0.0 kn Man, COG 000.0 T Man, SOG 0.0 kn Man
 - Chart: S-57 - Metres, N UP, TM, AIS Communication Failed, Standard Chart Display
- Chart Settings Dialog Box:**
 - Tab: Layers
 - Select: Standard (4), All (5)
 - Options:
 - Standard Display
 - Drying line
 - Buoys, beacons, aids to navigation
 - Buoys, beacons, structures
 - Lights
 - Boundaries and limits
 - Prohibited and restricted areas
 - Chart scale boundaries
 - Cautionary notes
 - Ship's routing systems and ferry routes
 - Archipelagic sea lanes
 - Miscellaneous
 - Other
 - Spot soundings
 - Submarine cables and pipelines
 - All isolated dangers
- Charts Menu:**
 - Chart Tools
 - Chart Settings (2)
 - Chart Projections
 - Chart Depths / Heights
 - Chart Databases
 - Chart Legend
 - Manual Chart Update
 - Chart Query
 - Chart Dangers
 - Chart I
 - Main Menu
 - Targets
 - Alarms
 - Routes
 - Sensors
 - Nav Tools (1)
 - Charts
 - System
 - Brilliance
 - Help
- Bottom Status Bar:**
 - Coordinates: 00°00.000'N, 000°00.000'E
 - GPS, DGPS
 - POSN, CURS, Rings 25 N, Display Base, ERBL1, Centre, ERBL2, Display Chart
 - Profiles, CID, iHelp

- 1 Click 'Charts'.
- 2 Open 'Chart Settings'.
- 3 Select 'Layers' tab.

- 4 Quick select 'IMO Standard' layers.
- 5 Quick select 'IMO All' layers.

- 6 Customise the display, as required.
- 7 Save 'Profiles' (see Section 1.2).

3.4 Abbreviations



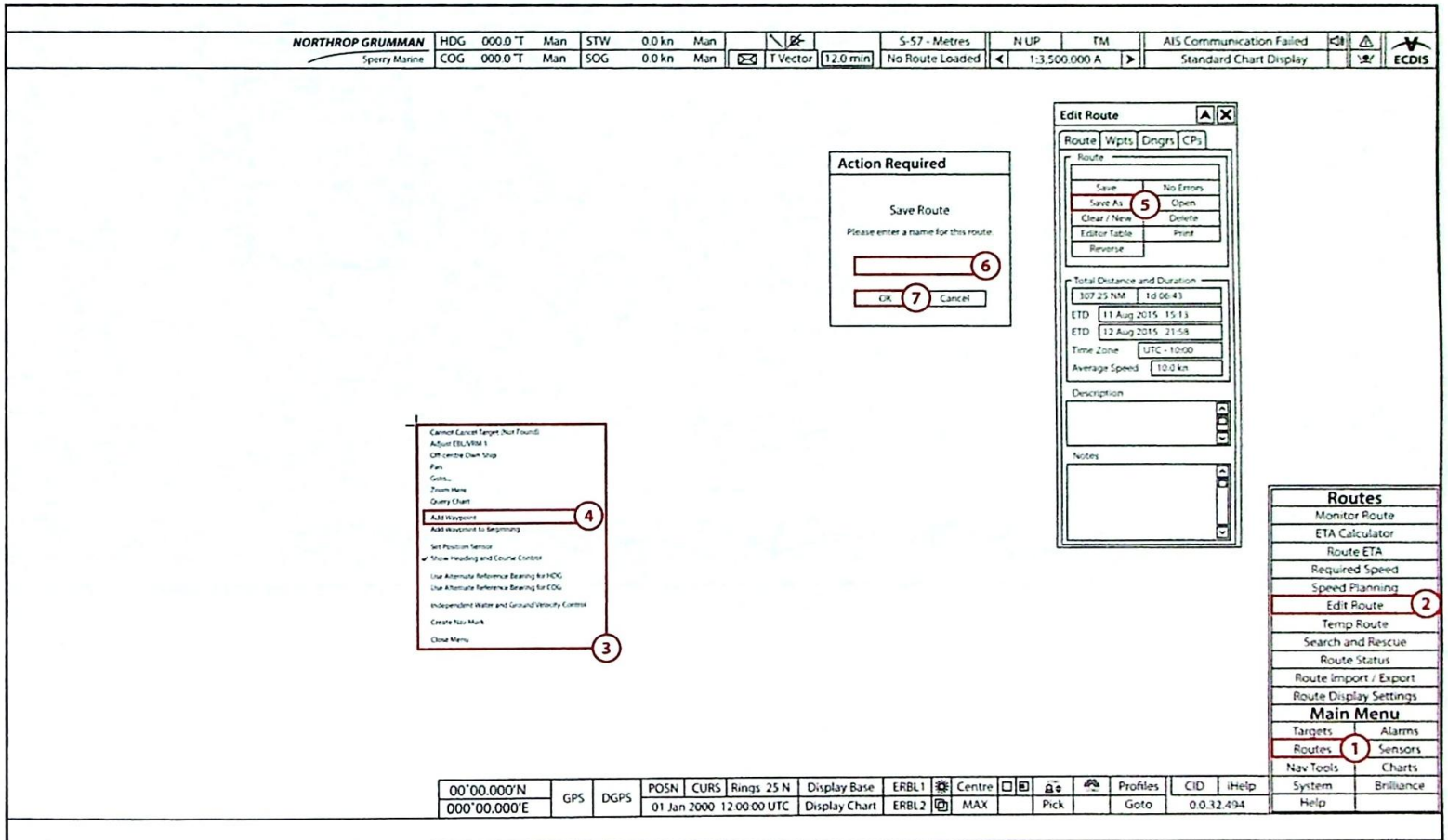
- 1 Heading
- 2 Course Over Ground
- 3 Speed Through Water
- 4 Speed Over Ground
- 5 North Up
- 6 True Motion
- 7 Automatic Identification System

- 8 Electronic Chart Display and Information System
- 9 Global Positioning System
- 10 Differential Global Positioning System
- 11 Position
- 12 Cursor
- 13 Universal Time Coordinated

- 14 Electronic Range and Bearing Line 1
- 15 Electronic Range and Bearing Line 2
- 16 Standard
- 17 Conning Information Display

Section 4: Route Planning

4.1 Creation



1 Click 'Routes'.

2 Open 'Edit Route'.

3 Right click to open the context menu.

4 Click 'Add Waypoint'. (Repeat steps 3 to 4 to add more waypoints.)

5 Click 'Save As'.

6 Name your route.

7 Click 'OK' to finish.

4.2 Schedule/Route Checking

The screenshot displays the ECDIS interface for route checking. At the top, the vessel name 'NORTHROP GRUMMAN' is shown along with speed data (HOG 000.0 T, STW 0.0 kn) and AIS status (AIS Communication Failed). The main area features a 'Route Editor Table' with columns for ID, Label, ETA (UTC), Latitude, Longitude, Turn Rate, Turn Radius, Distance, Bearing, Speed, Min Speed, Max Speed, KTD, Leg Type, and Leg Time. Two 'Edit Route' dialog boxes are open, one showing route details (Total Distance and Duration: 314.93 NM, 2d 03:32) and another showing a list of waypoints with dangers. A 'Routes' menu is visible in the bottom right corner.

ID	Label	ETA (UTC)	Latitude	Longitude	Turn Rate	Turn Radius	Distance	Bearing	Speed	Min Speed	Max Speed	KTD	Leg Type	Leg Time

- ① Click 'Routes'.
- ② Open 'Edit Route'.
- ③ Select 'Route'.
- ④ Open 'Editor Table'.
- ⑤ Manually adjust the speeds.
- ⑥ Alternatively, manually adjust ETD and ETA.
- ⑦ Click 'Dngrs'.
- ⑧ View dangers at each waypoint on the list.

4.3 Optimisation

The screenshot displays the ECDIS interface with several key components:

- Route Editor Table:** A table with columns for Id, Label, ETA (UTC 1000), Latitude, Longitude, Turn Rate (5), Turn Radius (6), Distance, Bearing, Speed, Min Speed, Max Speed, XTD (7), Leg Type (8), and Leg Color. It includes buttons for Add, Insert, Delete, Reset, No Error, Save, and Reset Min/Max Speeds.
- Edit Route Dialog (Top Right):** Shows 'Route 3' selected, with buttons for Save, Save As, Edit Table (4), and Reverse. It also displays Total Distance and Duration, ETA, and Average Speed.
- Edit Route Dialog (Middle):** Shows the 'Wpts' tab selected (9). It includes a Waypoint field (10), an Approaching Leg section with Rhumb Line and Off Track Limit (12), a Turn section with Speed and Off Track Limit (13), and a Departing Leg section with Rhumb Line and Off Track Limit (14).
- Routes Menu (Bottom Right):** A list of menu items including Monitor Route, ETA Calculator, Route ETA, Required Speed, Speed Planning, Edit Route (2), Temp Route, Search and Rescue, Route Status, Route Import / Export, Route Display Settings, Main Menu, Targets, Alarms, Routes (1), Sensors, Nav Tools, Charts, System, and Brilliance.

- 1 Click 'Routes'.
- 2 Open 'Edit Route'.
- 3 Select 'Route'.
- 4 Open 'Editor Table'.
- 5 Adjust 'Turn Rate'.
- 6 Adjust 'Turn Radius'.
- 7 Adjust 'XTD'.
- 8 Adjust 'Leg Type'.
- 9 Select 'Wpts' tab.
- 10 Use left arrow to select previous waypoint.
- 11 Use right arrow to select next waypoint.
- 12 Edit 'Approaching Leg' settings.
- 13 Edit 'Turn' settings.
- 14 Edit 'Departing Leg' settings.

4.4 Selecting Active Route

The screenshot shows the ECDIS interface with several dialog boxes and a menu. The 'Load Route' dialog box contains a table with the following data:

Name	Modified
Test Route	11 Aug 2015

The 'Monitor Route' dialog box displays the following information:

- Route: Test Route
- Load Route (button)
- Clear Route (button)
- Ship State: Sailing To W2 (2/7)
- XTD: 0.66 NMR
- XTD Alarm: 100 m
- Leg & Turn: Overall Settings
- Leg Bearing: 126.7°
- Leg DTG: 19.82 NM
- Leg TTG: 05:58:54
- Turn Radius: 1.00 NM
- Plan ROT: 2°/min
- Planned Spd: 02.0 kn
- Present Spd: 10.0 kn
- Required ROT: 10°/min
- Spd Min/Max: 02.0 02.0
- ETA: 11 Aug 2015 22:00
- Time Zone: UTC -10:00
- Next Leg Brg: 081.1°
- Next Leg Dist: 21.58 NM

The 'Routes' menu is open, showing the following options:

- Monitor Route (2)
- ETA Calculator
- Route ETA
- Required Speed
- Speed Planning
- Edit Route
- Temp Route
- Search and Rescue
- Route Status
- Route Import / Export
- Route Display Settings
- Main Menu
- Targets
- Alarms
- Routes (1)
- Sensors
- Nav Tools
- Charts
- System
- Brilliance
- Help

1 Click 'Routes'.

2 Open 'Monitor Route'.

3 Click 'Load Route'.

4 Select your route from the list.

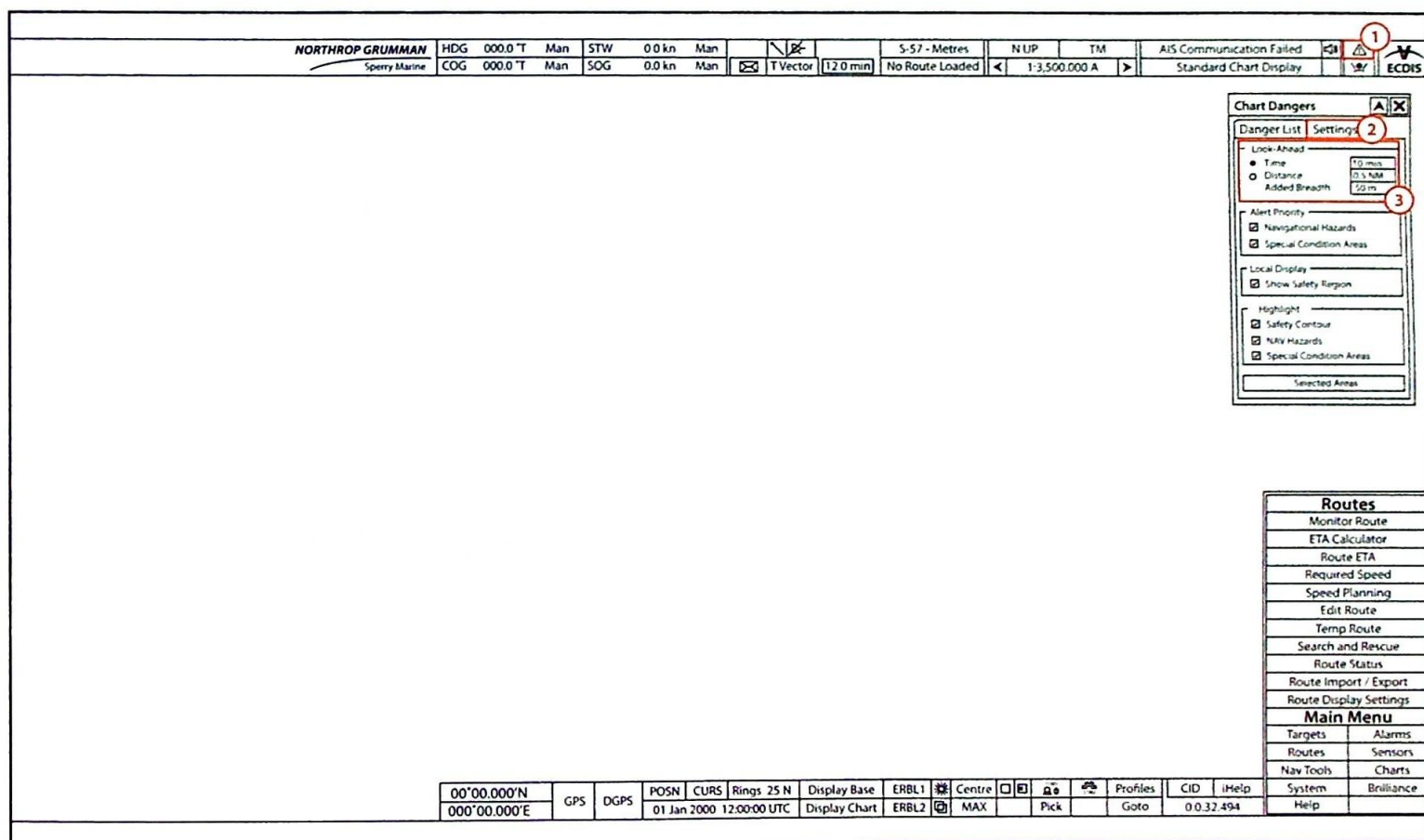
5 Click 'OK'.

6 Route information will appear.

7 Click 'Clear Route' to end monitoring.

Section 5: Route Monitoring

5.1 Look-Ahead

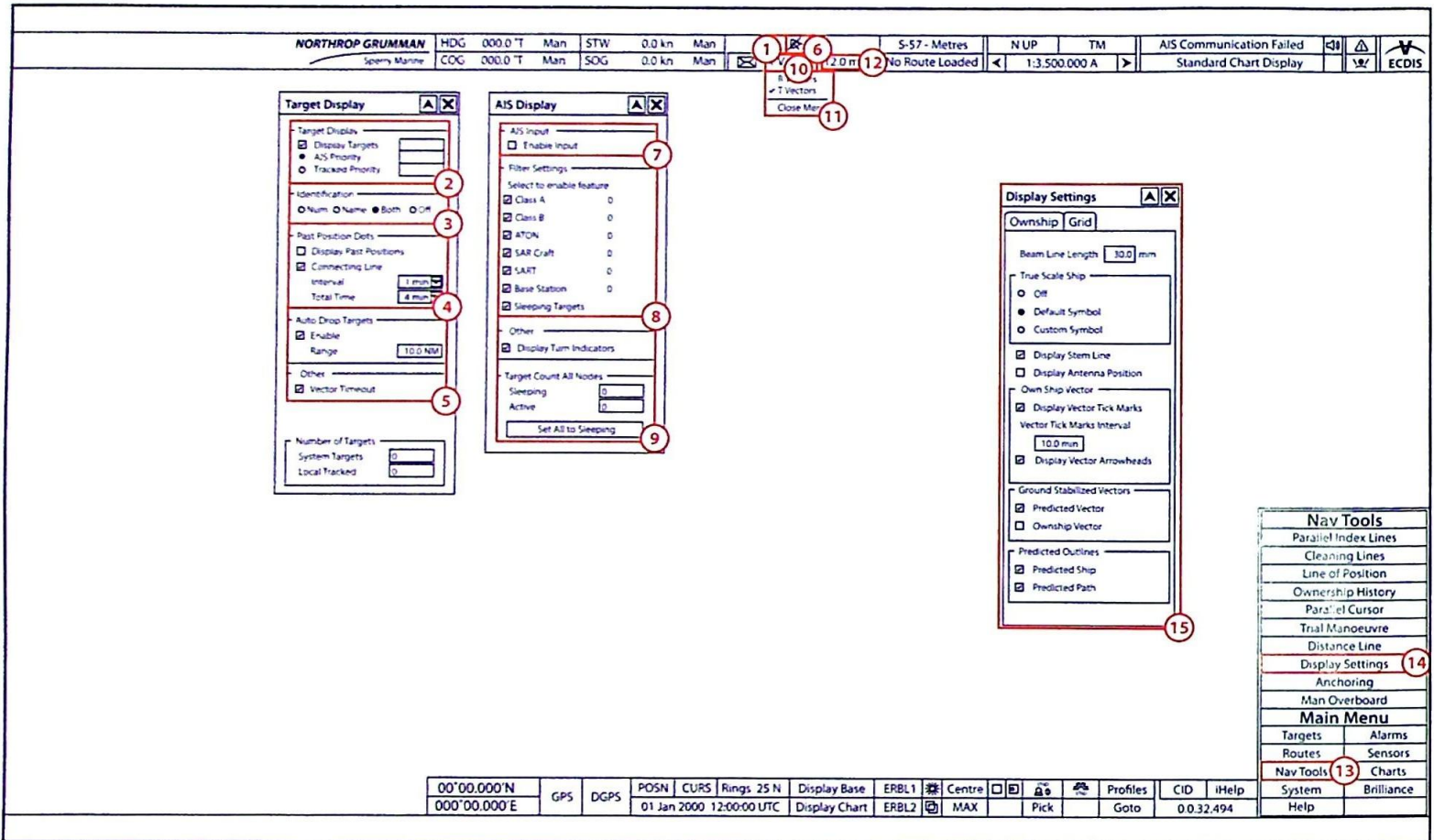


1 Right click on the warning icon.

2 Click 'Settings'.

3 Adjust the 'Look-Ahead' settings, as required.

5.2 TT/AIS/Vectors



1 Left click on the targets button.

2 Adjust 'Target Display' settings, as required.

3 Adjust 'Identification' settings, as required.

4 Adjust 'Past Position Dots' settings, as required.

5 Adjust 'Auto Drop Targets' settings, as required.

6 Left click on AIS button.

7 Tick to turn on/off AIS.

8 Adjust 'Filter Settings', as required.

9 Adjust 'Other' settings, as required.

10 Right click on 'T Vector'.

11 Switch between True/Relative vectors.

12 Change vector length.

13 Click 'Nav Tools'.

14 Open 'Display Settings'.

15 Adjust Ownship vectors in the 'Ownship' tab.

5.3 Position Fixing

1 Click on 'Nav Tools'.

2 Open 'Line Of Position'.

3 Right click to open the context menu.

4 Click 'Add Line of Position (LOP)'.

5 Click on 'Clicked Location' to place the LOP in the position of the context menu.

6 Click on 'Manually Specified Below' to manually enter the position of the LOP.

7 Click 'OK' to add LOP.

8 Click the tick box to use a bearing for your LOP.

9 Enter the bearing value to the object.

a Note: Repeat steps 3 to 8 to add more LOPs.

10 When enough LOPs have been entered, click 'Accept Fix' to complete the LOP fix.

11 Fix position.

12 Original position.

5.4 Voyage Data Logs

The screenshot shows the ECDIS interface with several panels. At the top, a status bar displays vessel information: **NORTHROP GRUMMAN** (Sperry Marine), HDG 000.0 T, Man, STW 0.0 km, Man, COG 000.0 T, Man, SOG 0.0 km, Man, T Vector, 12.0 min, No Route Loaded, 5-57 - Metres, N UP, TM, AIS Communication Failed, Standard Chart Display, and ECDIS. The main area contains two 'VisionMaster FT Data Log Viewer' windows. The left window (5) shows a data log for '2017.07.28.1018.xml' with columns for Timestamp, Date/Time of Fix, Fix Quality, and Fix Position. The right window (6) shows a data log for '2017.08.19.0231.xml' with columns for Timestamp, Latitude, Longitude, Heading, Speed, and Time of Data. To the right is a 'Diagnostics' panel (3) with a 'View Data Log' button (4) and an 'Export' section. At the bottom right is a 'System' menu (2) with 'System' highlighted (1). The bottom status bar shows coordinates (00°00.000'N, 000°00.000'E), GPS, DGPS, POSN, CURS, Rings 25 N, Display Base, ERBL1, Centre, ERBL2, MAX, Pick, Profiles, CID, iHelp, System (1), and Brilliance.

1 Click 'System'.

3 Select 'Data Log' tab.

5 Example LOP Data Log.

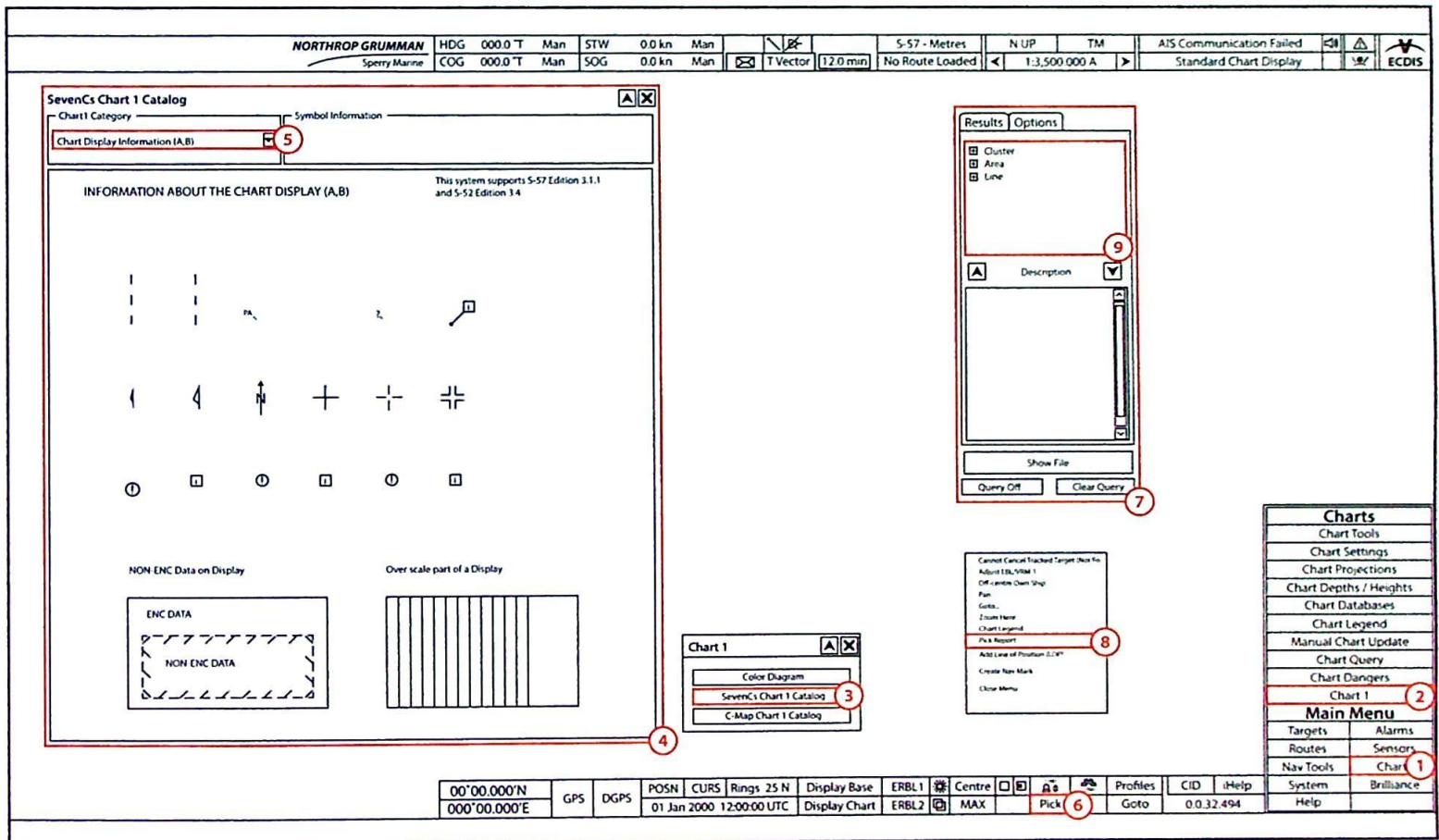
2 Open 'Diagnostics'.

4 Click 'View Data Log'.

6 Example CCRS Data Log.

Section 6: System Settings

6.1 Chart 1/Chart Query



- 1 Click on 'Charts' from the main menu.
- 2 Click 'Chart 1'.
- 3 Select 'SevenCs Chart 1 Catalog'.
- 4 'SevenCs Chart 1 Catalog' window will appear.
- 5 Use the dropdown to select different areas of 'Chart 1'.
- 6 Select 'Pick'.
- 7 'Pick Report' window will open.
- 8 Right click on the area you would like to check and click 'Pick Report'.
- 9 Object will appear in this area.

6.2 Position/Heading/Speed

The screenshot shows the ECDIS interface with three sensor configuration windows open: 'Heading', 'SOG', and 'Position'. Each window has a 'Man' (Manual) option selected. The 'Sensors' menu on the right lists various sensors, with 'Heading', 'SOG', and 'Position' highlighted. The interface also displays various status bars at the top and bottom, including vessel information, sensor data, and system settings.

- 1 Click 'Sensors'.
- 2 Open 'Position'.
- 3 Select 'Man'.
- 4 Enter manual position.
- 5 Open 'SOG' (speed over ground).
- 6 Select 'Man'.
- 7 Enter manual speed.
- 8 Open 'Heading'.
- 9 Select 'Man'.
- 10 Enter manual heading.

6.3 SAR

Search and Rescue

Route properties

Heading: 100.0
 Speed: 10.0 kn
 ETD: 11 Aug 2015 22:26
 ETA: 11 Aug 2015 22:26
 Distance: 2,154.72 NM
 Duration: 01:13:22

No Errors Show Line

Start Position

Lat: 43°56.200'S
 Lon: 001°49.401'S

SAR pattern parameters

Expanding Box
 Width: 1000 NM
 Separation: 5.0 NM

Port Starboard

Status
 Route is currently being edited.
 Save route before exiting menu?

Routes

- Monitor Route
- ETA Calculator
- Route ETA
- Required Speed
- Speed Planning
- Edit Route
- Temp Route
- Search and Rescue**
- Route Status
- Route Import / Export
- Route Display Settings

Main Menu

- Targets
- Alarms
- Routes**
- Sensors
- Nav Tools
- Charts
- System
- Brilliance
- Help

00°00.000'N GPS DGPS POSN CURS Rings 25 N Display Base ERBL1 Centre Profiles CID iHelp
 000°00.000'E 01 Jan 2000 12:00:00 UTC Display Chart ERBL2 MAX Pick Goto 0.032494

- 1 Click 'Routes'.
- 2 Open 'Search and Rescue'.
- 3 Set 'Heading', 'Speed', 'ETD' and 'ETA'.
- 4 Set 'Start Position'.
- 5 Set 'SAR' pattern.
- 6 Set 'Width' and 'Separation'.
- 7 Set search orientation.
- 8 Click 'Save'.
- 9 Example SAR on the chart.

6.4 Manual/About

The screenshot illustrates the steps to access the manual/help information. The 'System' menu is open, and 'Diagnostics' is selected. In the 'Diagnostics' window, 'Version' is selected, showing 'GRUMPY ECDIS (This Node)'. A 'Help' window is open, and a 'Launch Explorer' button is visible. A 'Vision Master Help' window is also open, showing 'System Overview'. A 'Copy To Clipboard' button is visible in the 'Diagnostics' window. A 'System' menu is also shown at the bottom right of the screenshot.

- 1 Click 'System'.
- 2 Open 'Diagnostics'.
- 3 Select 'Version'.
- 4 View information from the list displayed.

- 5 Click the 'iHelp' button.
- 6 Use the help cursor to click anywhere on the chart.
- 7 Click 'Launch Explorer'.

- 8 Manual/Explorer opens to display content.

17. TECDIS – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Main Toolbar	Information panel	
	Monitor colour palette		Date and time
	Chart orientation		Sensor data for navigation
	STD		Cursor information
	USER		Depth and Tide information
	Conning and anchorwatch		Wind speed
	Zoom in		Drift
	Chart scale		Display for anti grounding system
	Zoom out		Menus
	Query cursor		Voyage information and/or Autopilot information
			Alarms, warnings and notifications
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Main Toolbar	User-created symbols	
	Radar overlay		Mariner Objects
	EBL/VRM bearing		Mariner Objects toolbar
	Show ARPA targets		Add new symbol
	Show AIS targets	Maritime calculations/LOP	
	MOB symbol/eventmarker		Calculations
			LOP
	NAVTEX		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Chart	Safe	
	Layers		Safety contour
	More		Safety depth
	Page 1		Ship Draught
	Page 2		Check time/width
	Page 3		Select highlighting
	Base		Navigational hazards (ON/OFF)
	Standard		
	S-52/INT 1		
	Admiralty Information Overlay		
	Accuracy (ON/OFF)		
	Spot soundings (ON/OFF)		
	Scale min (ON/OFF)		
	Data dependent time		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Route planner		
	Route toolbar		Voyage planner
	Route selection window		SAR

TECDIS – Familiarisation Checklist (Page 2 of 2)

6.	<p>Route Monitoring</p> <p>Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Past Track</td> <td style="width: 50%;">Wind speed</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td>Depth and Tide information</td> <td>Drift Voyage information and/or Autopilot information</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Past Track	Wind speed			Depth and Tide information	Drift Voyage information and/or Autopilot information						
Past Track	Wind speed												
Depth and Tide information	Drift Voyage information and/or Autopilot information												
7.	<p>Chart Updating</p> <p>The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Settings menu</td> </tr> <tr> <td style="width: 50%;">Chart utilities</td> <td style="width: 50%;">C-Map chart update</td> </tr> <tr> <td>Load charts</td> <td>Chart licenses</td> </tr> <tr> <td>Installed Certificates</td> <td>INT-1 dictionary</td> </tr> <tr> <td>Chart library</td> <td> </td> </tr> <tr> <td>Manual chart updates</td> <td> </td> </tr> </table>	Settings menu		Chart utilities	C-Map chart update	Load charts	Chart licenses	Installed Certificates	INT-1 dictionary	Chart library		Manual chart updates	
Settings menu													
Chart utilities	C-Map chart update												
Load charts	Chart licenses												
Installed Certificates	INT-1 dictionary												
Chart library													
Manual chart updates													
8.	<p>System Sensors</p> <p>Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Main Toolbar</td> <td style="width: 50%;">Settings menu</td> </tr> <tr> <td>Past Track</td> <td>Setup</td> </tr> <tr> <td>Primary pos. source</td> <td>NMEA input status</td> </tr> <tr> <td>Secondary pos. source</td> <td>Navigation position offset</td> </tr> <tr> <td colspan="2">Sensor data for navigation</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Main Toolbar	Settings menu	Past Track	Setup	Primary pos. source	NMEA input status	Secondary pos. source	Navigation position offset	Sensor data for navigation			
Main Toolbar	Settings menu												
Past Track	Setup												
Primary pos. source	NMEA input status												
Secondary pos. source	Navigation position offset												
Sensor data for navigation													
9.	<p>System Alerts</p> <p>Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Display for anti grounding system</td> </tr> <tr> <td> </td> </tr> <tr> <td>Alarms, warnings and notifications</td> </tr> <tr> <td> </td> </tr> </table>	Display for anti grounding system		Alarms, warnings and notifications									
Display for anti grounding system													
Alarms, warnings and notifications													
10.	<p>System Units</p> <p>Become familiar with the system's logbook, records, data storage and configuration set up.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Log</td> </tr> <tr> <td style="width: 50%;">Date</td> <td style="width: 50%;">AIS ship data</td> </tr> <tr> <td>Visual replay</td> <td>Screenshots</td> </tr> </table>	Log		Date	AIS ship data	Visual replay	Screenshots						
Log													
Date	AIS ship data												
Visual replay	Screenshots												
11.	<p>ECDIS Operator's Manual</p> <p>Locate the system's operator's user guide for referencing and help.</p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Hard copy of Operator's Manual only available</td> </tr> <tr> <td> </td> </tr> </table>	Hard copy of Operator's Manual only available											
Hard copy of Operator's Manual only available													

18. Tokyo Keiki EC-8100/8600/8000-A/8500-A – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Main Screen Become familiar with the basic chart functionality from the main display.		
	Main Screen		Menu
	Toolbar		Monitor mode
	System data		Settings
	Information of route monitoring/track control		TT/AIS List
	Cursor info and active chart info		Navigational INFO
	Menu		Chart
	Alerts		Route
	Status bar		NavLine and No-Go Area/Line
			Navigation Record
			Plan mode
			Update mode
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	TOOLS		Settings
	Toolbar		NavLine and No-Go Area/Line
	Activate AIS targets		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Toolbar		Chart
	Chart object display		Chart
	Chart Display INFO (ON/OFF)		Presentation
	Safety contour		Customize
			Other
			Safety Contour
			AIO layer (ON/OFF)
			Hazard Symbol (ON/OFF)
			Check Periodic Dates (ON/OFF)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Plan mode		
	Chart		Route
			SAR Assist
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.		
	Menu		
	Monitor mode		Past POSN ON/OFF
	Route Monitoring and TC		Guard Frame
	Settings		Radar
	North Up		Targets
	Vector Length		Association
	Own Ship		Anchor
	Safety Depth		Danger/Caution Objects (ON/OFF)
	2nd POSN Sensor Display (ON/OFF)		Past Positions (ON/OFF)
	TT/AIS List		Navigational INFO

Tokyo Keiki EC-8100/8600/8000-A/8500-A– Familiarisation Checklist

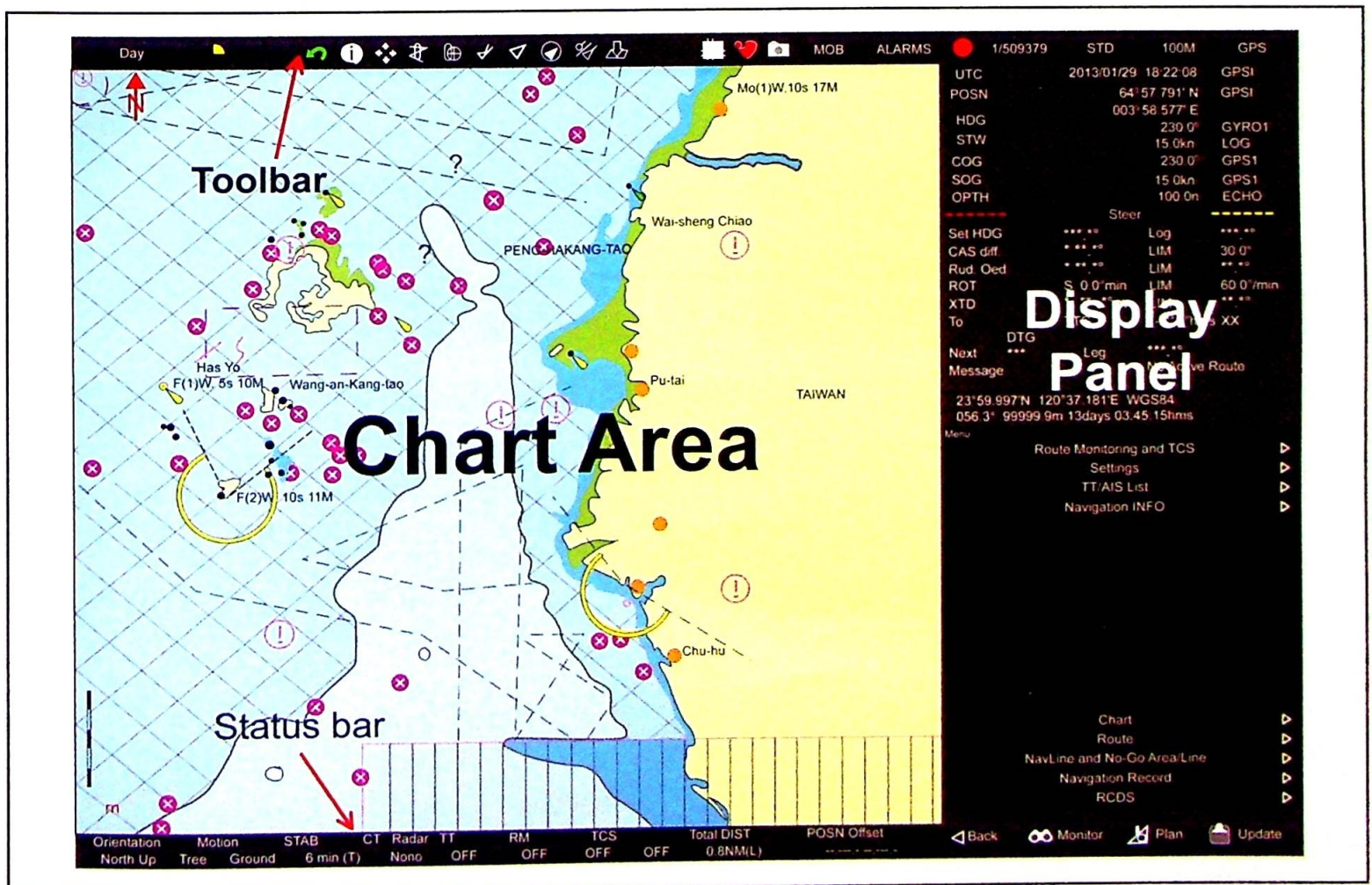
(Page 2 of 2)

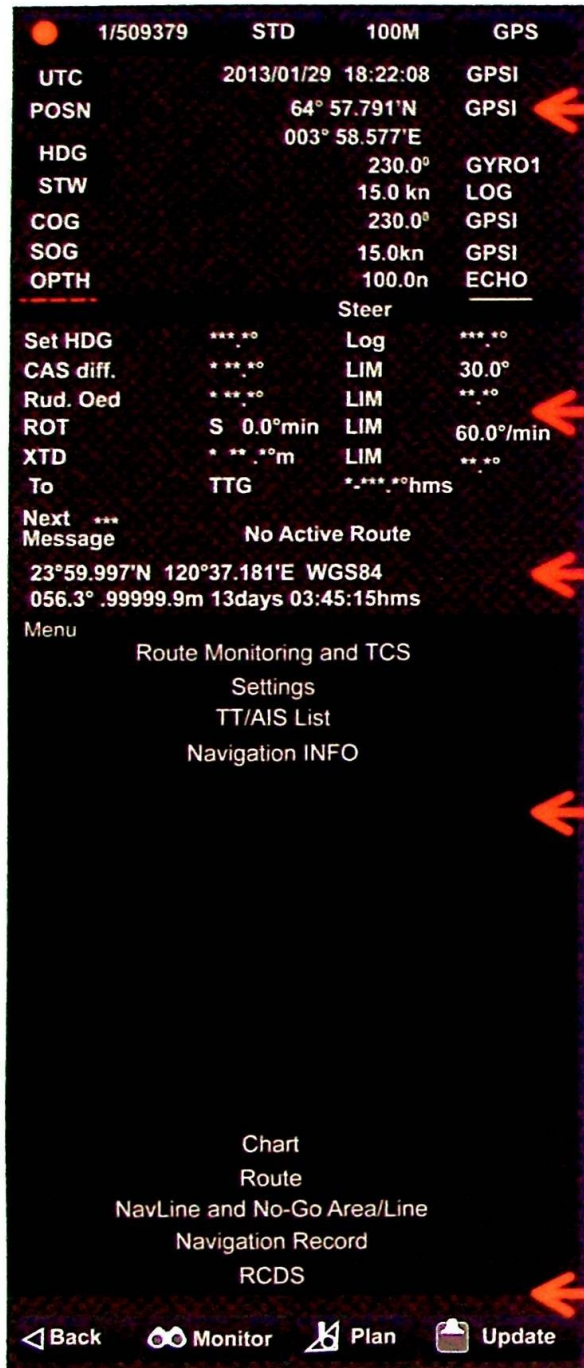
7.	Chart Updating	
	The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.	
	Update mode	Delete Chart
	Chart Licenses	Chart Catalogue
		Database
		Charts
	Auto Updating	
	Semi-Auto Updating	
	Update Log	
	Manual Update	
8.	System Sensors	
	Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.	
	Main Screen	SETTINGS
	Sensor Panel	Vessel
		Sensors
	AIS	
	Radar targets	
9.	System Alerts	
	Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.	
	Alerts	Status bar
	Active Alerts	
	Limits	
10.	System Units	
	Become familiar with the system's logbook, records, data storage and configuration set up.	
	Navigation Record	
	Log File	Reference
	Screen Shot	Maintenance
11.	ECDIS Operator's Manual	
	Locate the system's operator's user guide for referencing and help.	
	Main Menu	
	MANUALS	

Tokyo Keiki EC-8100/8600/8000-A/8500-A

Key Tokyo Keiki EC-8100/8600/8000-A/8500-A ECDIS Menu Functions

1.	View list of installed Charts	Update>Chart Catalogue>Charts Tab>Chart List>Database
2.	View the latest update number installed	Update>Update Log>Select Database>Description/Updates
3.	Change Chart Settings	Monitor>Chart>Presentation/Customise Tab
4.	View information on charted objects and view additional text	Toolbar>Show information on chart objects>ENT on selected object
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Menu>Monitor Settings>Own Ship Tab>Safety Depth
6.	Input a User Map Object	Update>Manual Update>Add New
7.	Input a Manual Update	Update>Manual Update>Add New
8.	Turn the Predictor on	Monitor>Settings>Own Ship Tab>Prediction Line (ON/OFF)
9.	Configure the Guard Frame (Anti-grounding Cone)	Monitor>Settings>Guard Frame Tab
10.	Configure Ship's Track	Monitor>Settings>Past Position
11.	Configure Velocity Vectors	Monitor>Settings>Own Ship [and] Display Tab
12.	View past Alarms and Warnings	Toolbar>Red Alarms Icon
13.	Input a Visual or Radar Fix	Monitor>Navigational Info>Line of Position (On)
14.	Turn on Radar Image Overlay	Monitor>Settings>Radar Tab>No.1/2 System
15.	Take a Screenshot	Toolbar>Take a screenshot





System Data

Route Monitoring and Track Control Data

Cursor Information

Menu

Mode Buttons

Day Colour Palette

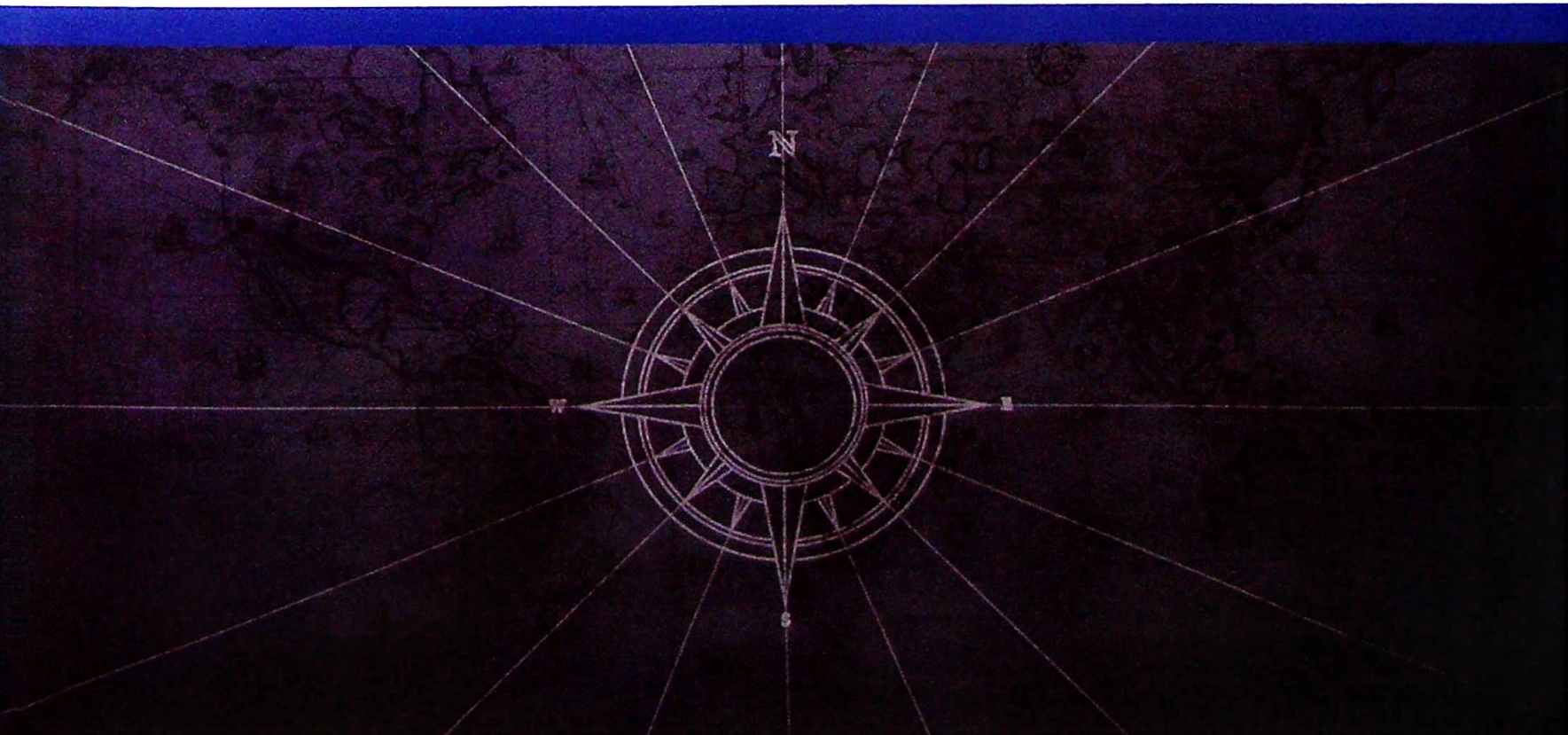
- Adjust Brightness
- Zoom In
- Zoom Out
- Previous Chart Display
- Chart Object Information
- Scroll Chart
- Create/Modify Waypoints
- Create/Modify Critical Points
- Activate AIS Targets
- Deactivate AIS Targets

- Associate Targets
- Dissociate Targets
- Create/Modify No-Go Line/Areas
- Off-centre Own Ship
- True Motion/Relative Motion
- Take a Screenshot
- Show Man Overboard Info
- Show and Set Alarms
- Scale Indication/Change Scale
- Display Category
- Safety Depth
- Accuracy of Primary Posn Sensor

Tokyo Keiki

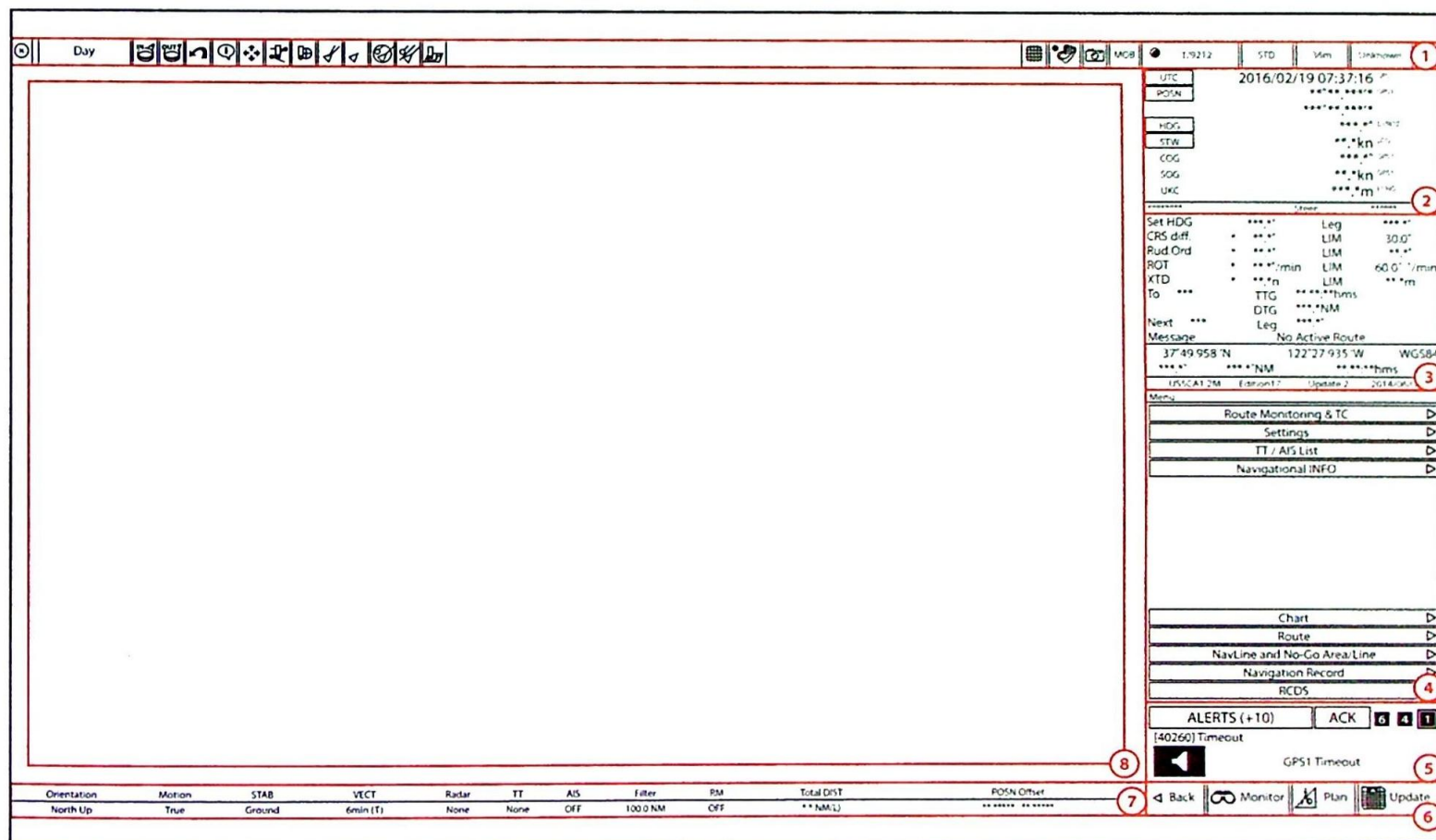
EC-8100/EC-8600/EC-8000-A/EC-8500-A

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Section 1: Main Display

1.1 Screen Layout



- 1** Toolbar
- 2** System data
- 3** Information of route monitoring/ track control
- 4** Menu
- 5** Alert
- 6** Mode and view-switching buttons
- 7** Status bar
- 8** Chart display area

1.2 Colour Palette

The screenshot shows the ECDIS interface with a toolbar at the top. A red circle labeled '1' highlights the 'Colour' button in the toolbar. A dropdown menu is open, showing options: 'Day', 'Day Blackback', 'Dusk', and 'Night'. A red circle labeled '2' highlights the 'Day' option in the menu.

The main display area is currently blank. The right-hand panel shows various data fields and settings, including UTC (2016/02/19 07:37:16), POSN, HDG, STW, COG, SOG, UKC, and a 'Steer' section with parameters like Set HDG, CRS diff, Rud.Ord, ROT, XTDR, To, Next, and Message. The bottom status bar shows orientation (North Up), motion (True), STAB (Ground), VECT (6min TT), Radar (None), TT (None), AIS (OFF), Filter (100.0 NM), RM (OFF), Total DIST (**NML), and POSN Offset (*****).

- 1 Select the 'Colour' table button.
- 2 Left click to select the colour palette.

1.3 Range/Scale/Motion

The screenshot shows the ECDIS interface with several key elements highlighted:

- 1**: Zoom in and out controls in the top toolbar.
- 2**: Scale indicator button showing 'Normal Scale' and 'Best Scale'.
- 3**: Scale list showing various scale options: Overview (1/50000), World (1/45000), General (1/40000), Coastal (1/35000), Approach (1/30000), Harbor (1/25000), Plan (1/20000), and Radar (1/20000).
- 4**: Scale condition indicator showing 'Normal Scale' and 'Best Scale'.
- 5**: Scale list showing various scale options.

The bottom status bar displays the following parameters:

Orientation	Motion	STAB	VECT	Radar	TT	AIS	Filter	RM	Total/DIST	POSN Offset
North Up	True	Ground	6min (T)	None	None	OFF	100.0 NM	OFF	** NML	** ** ** *

1 Left click to zoom in and out.

2 Left click to select 'Relative Motion' and 'True Motion'.

3 Scale indication button shows the scale red or green indication.

a Red - Unsuitable scale.

b Green - Suitable scale.

4 Scale condition of an active chart.

5 Scale list.

1.4 Setting CCRP

EC-8x00 Service Menu

Serial No. 9000	System Type EC-8600/K	Monitor 26in EI20	Resolution WUXGA
Ship Shape	Length 200m Width 40m	Head Length 150m Max Draft 20m	Bridge Height 5m
Position Sensor			
GPS1	Port 5	4800bps	ANT.X +00.0m
N/A	Port N/A	*bps	ANT.X +***.m
Heading Sensor			
GYRO1	Port 6	38400bps	Speed Sensor
N/A	Port N/A	*bps	Dual Axis Log
			Port 7 4800bps

Setting List

Serial (1)	Serial (2)	Ethernet
COM1	RX/TX	
COM2	RX/TX	Operation Panel
COM3	RX	
COM4	RX	
COM5	RX	GPS1
COM6	RX	GYRO1
COM7	RX	LOG
COM8	RX	ECHO
COM9	RX	TT1
COM10	RX	TT2
COM11	RX	Anemometer
COM12	RX/TX	
COM13	RX/TX	
COM14	RX/TX	

EC-8x00 Service Menu

Serial No.

System Type

<input type="text" value="EC-8600/K"/>	<input type="text" value="EC-8100/K"/>	<input type="text" value="No.1 ECDIS"/>	<input type="text" value="Backup ECDIS"/>
<input type="text" value="EC-7500/A"/>	<input type="text" value="EC-7000/A"/>	<input type="text" value="ECS"/>	
<input type="text" value="Remote ECS #1"/>	<input type="text" value="Remote ECS #2"/>	<input type="text" value="Remote ECS #3"/>	
<input type="text" value="Remote ECS #4"/>	<input type="text" value="Remote ECS #5"/>	<input type="text" value="Remote ECS #6"/>	<input type="text" value="DEMO"/>

System Function ID

Monitor Resolution Pixel Pitch

OwnShip Position Heading/Speed Radar/TT AIS Pilot/BM Tracking Chart Other Tools I/O Port VDR

Ship Shape 2

Length Width Head Length Max Draft Bridge Height

Main Menu

Configuration 1

Others >

Maintenance >

Exit Service Menu

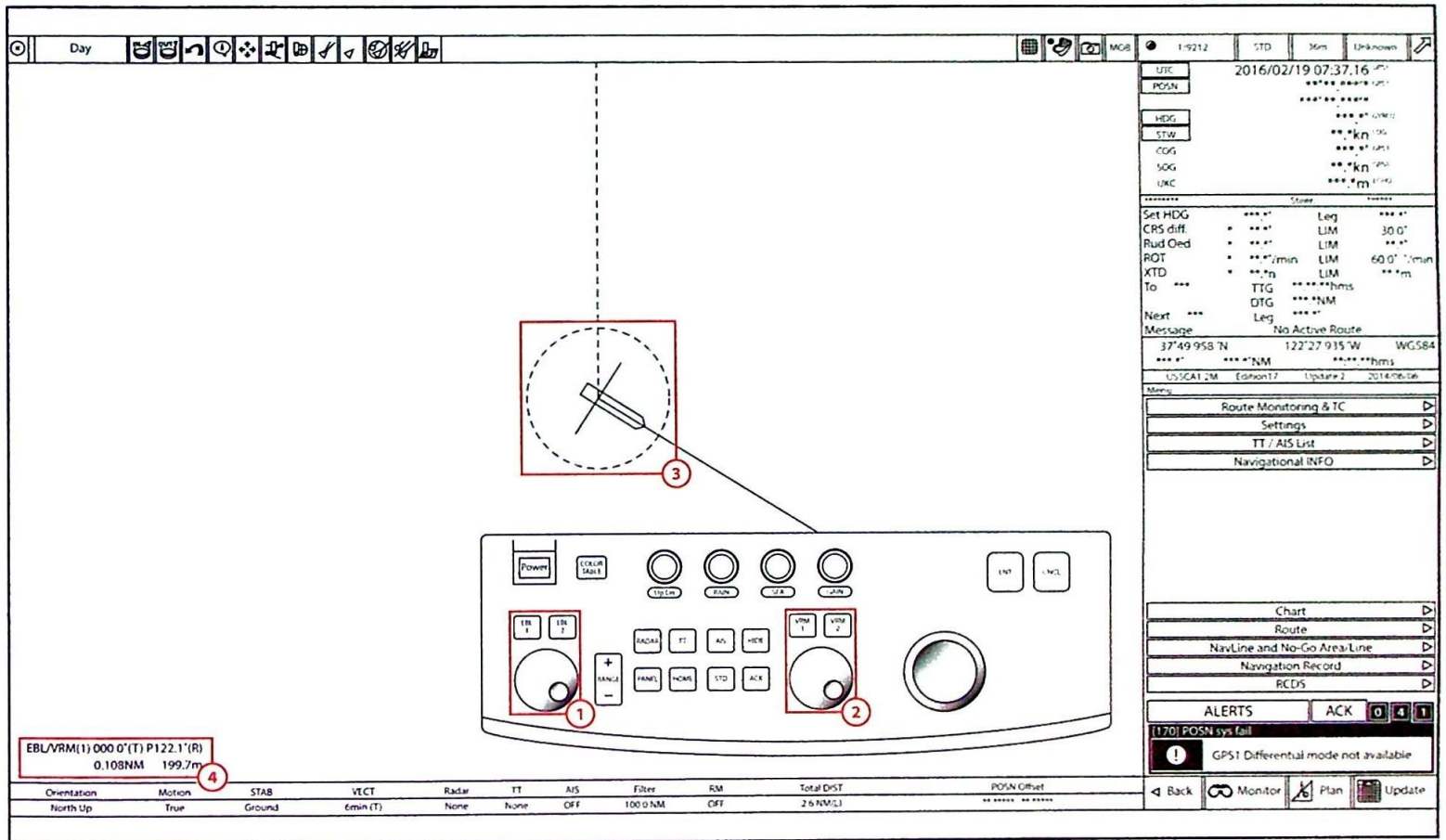
Note to user: To find CCRP settings, you must exit ECDIS Mode and enter the 'Service Menu'. This should only be done by a manufacturer approved engineer.

- 1** Select 'Configuration'.
- 2** Make sure 'OwnShip' is selected to see the CCRP.

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Section 2: Navigation Tools

2.1 EBL/VRM



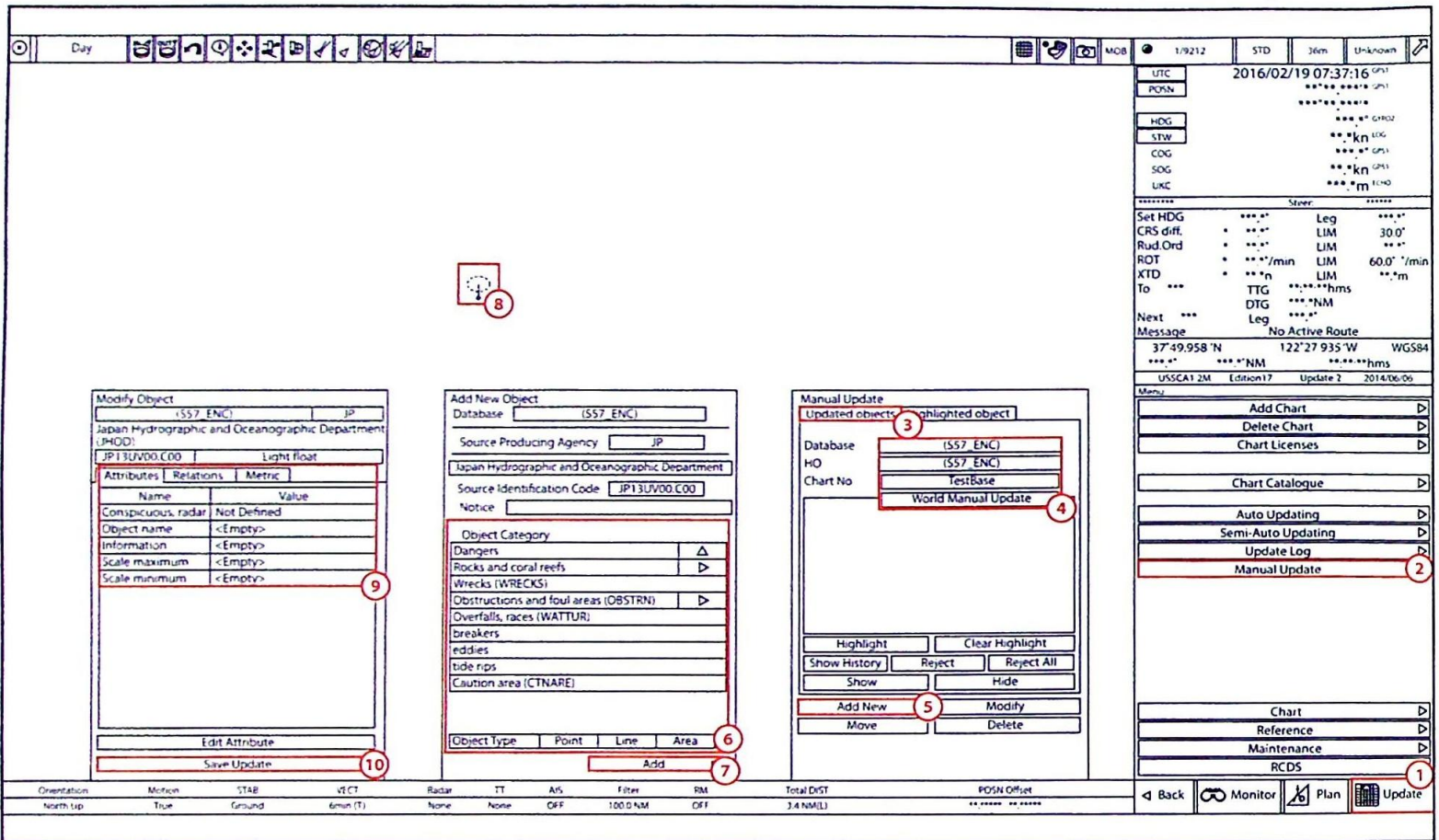
1 EBL/VRM 1 from the operation panel.

3 Example of EBL/VRM on the chart.

2 EBL/VRM 2 from the operation panel.

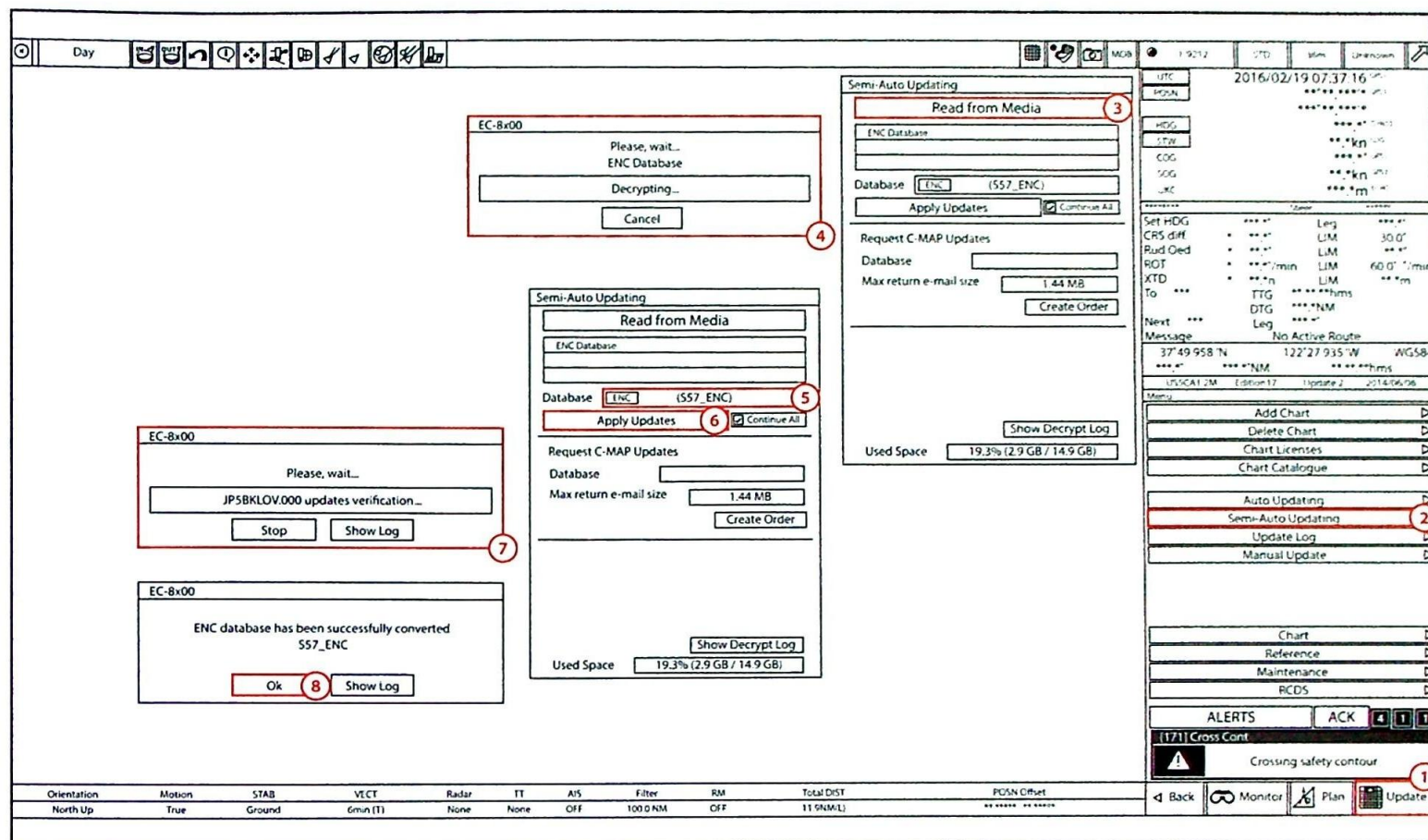
4 EBL/VRM information box.

2.2 Manual Corrections



- 1** Select 'Update' within Mode.
- 2** Select 'Manual Update'.
- 3** Select 'Updated objects'.
- 4** Choose a database from the dropdown.
- 5** Select 'Add New'.
- 6** Choose an object from the 'Object Category'.
- 7** Select 'Add'.
- 8** Left click on the chart to specify the position.
- 9** Modify the attributes of the object.
- 10** Select 'Save Update'.

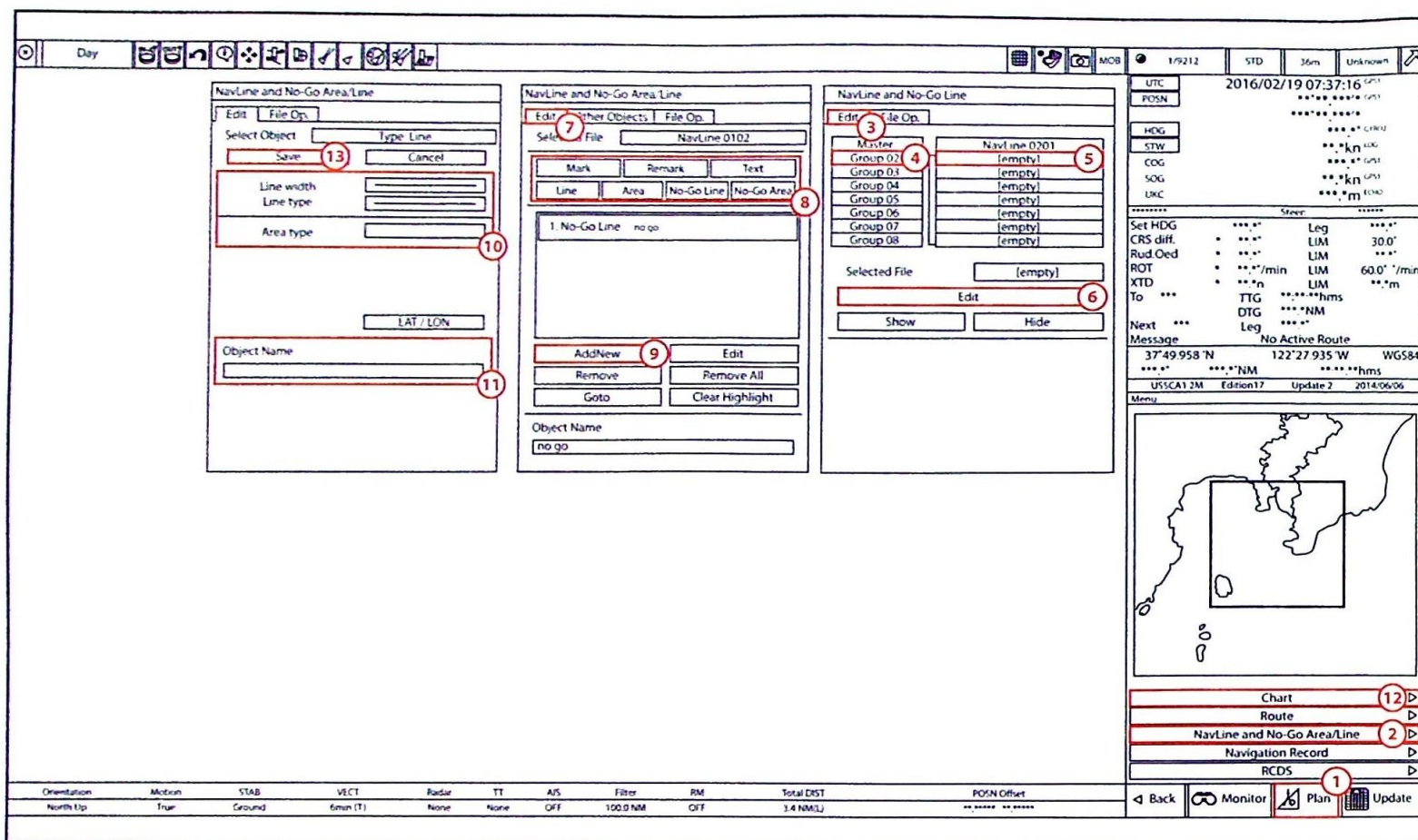
2.3 Chart Updates



Note to user: Ensure your update media is inserted and that permits and base CD are installed.

- 1 Select 'Update' within Mode.
- 2 Select 'Semi-Auto Updating'.
 - a Make sure your update media is connected.
- 3 Select 'Read from Media'.
- 4 Decryption window.
- 5 Select the correct database.
- 6 Select 'Apply Updates' to begin updating the charts.
- 7 This pop-up window shows progress.
- 8 Select 'OK'.

2.4 No Go Areas/User Charts



- 1 Select 'Plan'.
- 2 Select 'NavLine and No-Go Area/Line'.
- 3 Select the 'Edit' tab.
- 4 Choose a group.
- 5 Select '[empty]'.
- 6 Select 'Edit'.
- 7 Ensure 'Edit' is selected again.
- 8 Choose one of the items to add.
- 9 Select 'AddNew'.
- 10 Select object attributes.
- 11 Object name is required.
- 12 Left click on the chart to specify first point and click again to add line.
- 13 Select 'Save'.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour

The screenshot shows the ECDIS interface with the following settings and actions:

- 1** Select 'Monitor' in the bottom status bar.
- 2** Choose 'Settings' in the top menu.
- 3** Select 'Own Ship' in the 'Settings' panel.
- 4** Edit 'Safety Depth' to 30m in the 'Settings' panel.
- 5** Select 'Chart' from the top menu.
- 6** Select 'Presentation' in the 'Add New Object' panel.
- 7** Edit 'Shallow Contour' and 'Deep Contour' to 5m and 30m respectively in the 'Add New Object' panel.

1 Select 'Monitor'.

2 Choose 'Settings'.

3 Select 'Own Ship'.

4 Edit 'Safety Depth'.

5 Select 'Chart' from the top menu.

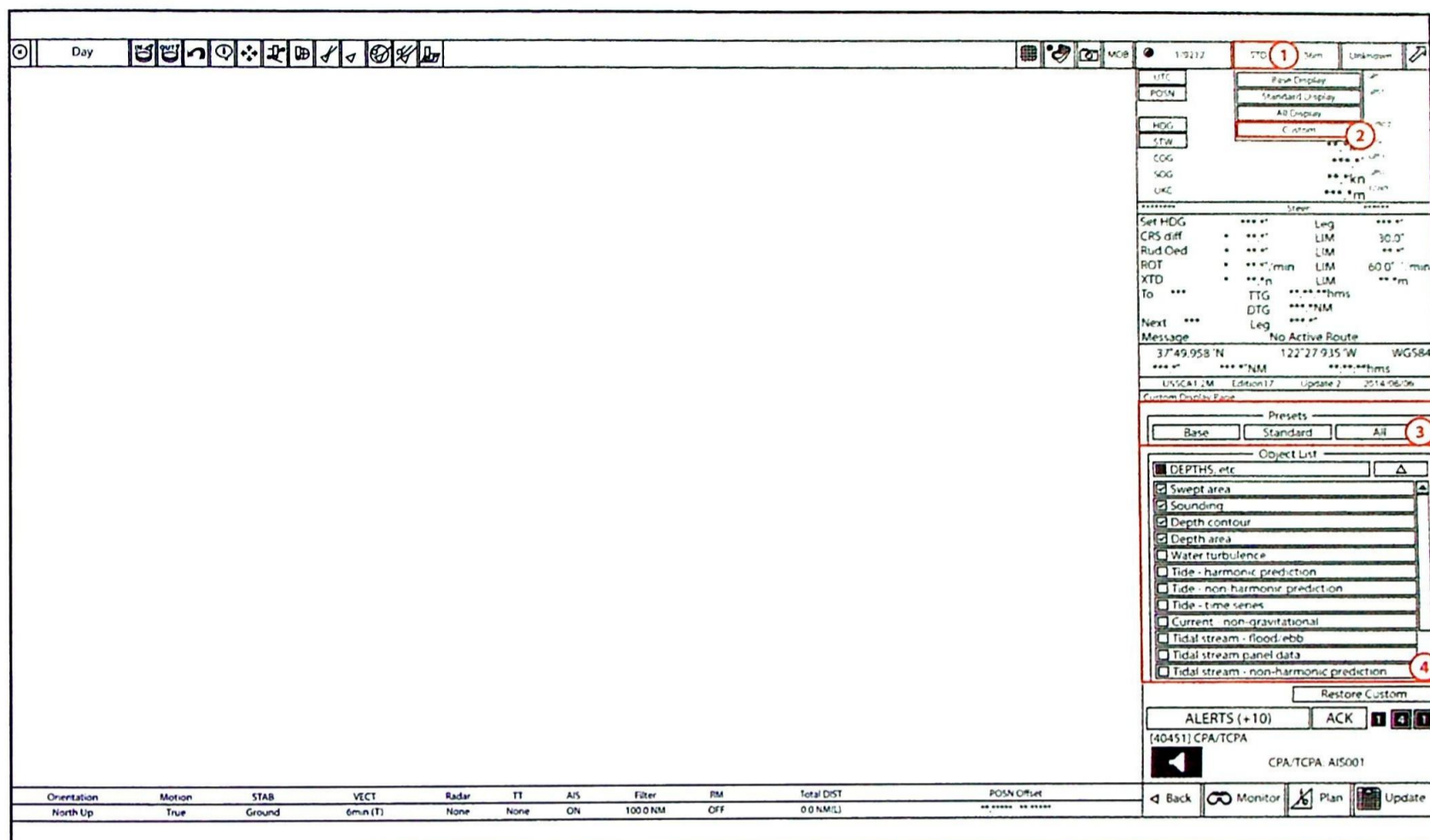
6 Select 'Presentation'.

7 Edit 'Shallow Contour' and 'Deep Contour'.

3.2 Display Preference Options

- 1 Select 'Monitor'.
- 2 Select 'Chart' from the top menu.
- 3 Select 'Presentation' tab.
- 4 Configure 'Chart Symbol' settings.
- 5 Select '2 Colors' or '4 Colors'.
- 6 Select 'Customize' tab.
- 7 Configure 'Depth Settings'.
- 8 Configure 'Boundary Settings'.
- 9 Select 'Other' tab.
- 10 Configure 'Other Settings'.
- 11 Configure 'Text Settings'.

3.3 Display Configuration



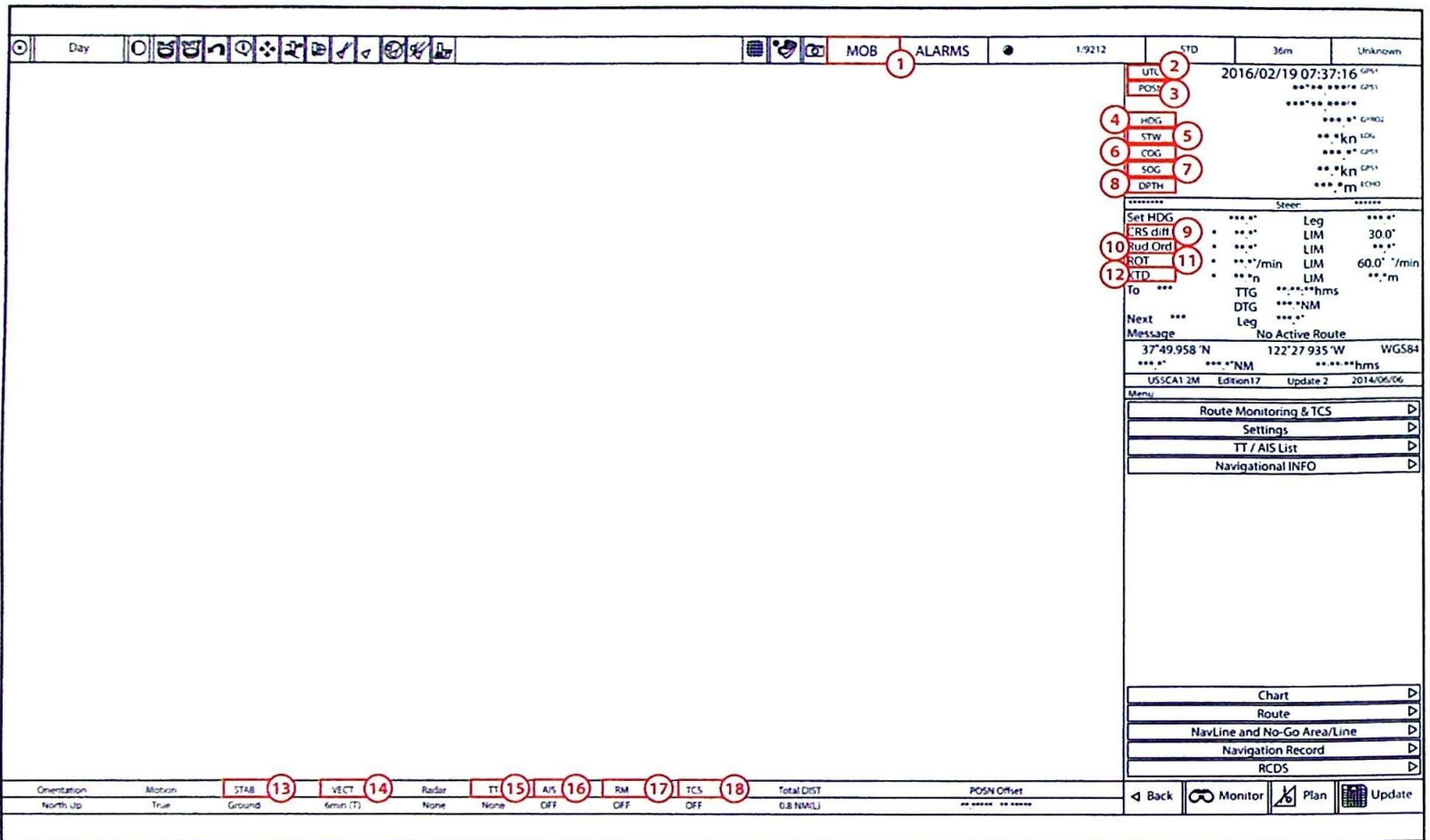
① Press 'Chart object button'.

② Select 'Custom' from the dropdown.

③ Select 'Presets'.

④ Enable/disable layers, as required.

3.4 Abbreviations



- | | | |
|-------------------------------------|--------------------------------|---|
| 1 Man Overboard | 7 Speed Over Ground | 13 Stabilisation |
| 2 Universal Time Coordinated | 8 Depth | 14 Vector |
| 3 Position | 9 Course Difference | 15 Tracked Targets |
| 4 Heading | 10 Rudder Order | 16 Automatic Identification System |
| 5 Speed Through Water | 11 Rate of Turn | 17 Relative Motion |
| 6 Course Over Ground | 12 Cross Track Distance | 18 Track Control System |

Section 4: Route Planning

4.1 Creation

The screenshot shows the ECDIS software interface with several key elements:

- Toolbar:** Located at the top, containing various navigation and editing tools. A red circle '8' highlights the 'Add' button.
- Map Area:** Displays a route line on a chart. A red circle '9' highlights the first waypoint on the route.
- Route Window:** A pop-up window titled 'Route' with 'San Francisco' in the 'Selected File' field. A red circle '7' highlights the 'Save' button. A red circle '12' highlights the 'Selected File' field.
- WayPoint Table:** A table at the bottom of the interface listing waypoints. A red circle '11' highlights the 'WayPoint' tab.
- Chart Window:** A window on the right side of the map showing a chart. A red circle '2' highlights the 'Route' tab.
- Other Windows:** A 'Create Route' window is open, showing a list of groups (Group 01 to Group 08) and a 'Show' button. A red circle '6' highlights the 'Create Route' button, and a red circle '5' highlights the '[empty]' field.

WayPoint	Cal Points	ETA	Dangers	Cautions	Geometry							
ID	Name	LAT	LON	Radius (m)	Reach (L)	ROT (*°/min)	XTD Limit (m)	SPD (kn)	RL/GC	Leg (*)	Distance (NM)	DIST (NM)
WPT8		37°49.307'N	122°28.615'W	1600m	2.0L	11.6	300.0m	10.5kn	RL	245.4'	1.1	6.9
WPT9		37°48.922'N	122°29.680'W	1600m	2.0L	11.6	300.0m	10.5kn	RL	244.3'	3.3	7.9
WPT10		37°47.492'N	122°33.432'W	1600m	2.0L	20.4	300.0m	18.5kn	RL	245.6'	1.8	11.2
WPT11		37°46.724'N	122°35.576'W	1600m	2.0L	20.4	300.0m	18.5kn	RL	251.6'	1.5	13.0
WPT12		37°46.333'N	122°37.062'W									14.5

- 1 Select 'Plan'.
- 2 Select 'Route'.
- 3 Select 'Edit'.
- 4 Choose a group.
- 5 Select '[empty]' field.
- 6 Select 'Create Route'.
- 7 Name your route.
- 8 Select 'Add'.
- 9 Left click to place first waypoint. Consecutive left clicks will place more waypoints.
- 10 To view the table editor select 'Show Table'.
- 11 Select 'WayPoints' tab to edit through the table.
- 12 Select 'Save'.

4.2 Schedule/Route Checking

The screenshot displays the ECDIS software interface. At the top, there is a menu bar with 'Day' and various navigation icons. The main display area shows a map with a red icon representing a danger, circled with a red '6'. Below the map, there are several panels and controls:

- WayPoints | Critical Points | ETA | Dangers | Cautions | Geometry:** A tabbed menu where 'Dangers' is selected, circled with a red '2'.
- Attributes:** A table showing details for a selected 'Light' danger, circled with a red '4'.

Attributes	
Category of light	<unknown>
Colour	white
Exhibition condition of light	night light
Light characteristic	flashing
Scale minimum	119999
Signal group	(1)
- Show Table:** A button circled with a red '1'.
- Alerts:** A section with 'ALERTS' and 'ACK' buttons, and a 'Rev Counter Timeout' indicator.
- Bottom Panel:** Contains various status indicators and buttons like 'Back', 'Monitor', 'Plan', and 'Update'.

1 Select 'Show Table'.

2 Select 'Dangers', 'Cautions' or 'Geometry' to check.

3 Example of dangers shown. Left click to show attributes.

4 Shows the attributes of object.

5 Select 'highlight' and 'GO TO'.

6 Example visual indication of a selected danger.

4.3 Optimisation

The screenshot shows the ECDIS software interface with a route optimization window open. The window includes a 'WayPoints' table and various configuration options. Red boxes and numbers 1 through 6 highlight the following elements:

- 1**: The 'ETA' tab in the 'WayPoints' section.
- 2**: The 'Departure Time' input field.
- 3**: The 'Show Table' button.
- 4**: The 'ETA' tab in the 'WayPoints' section (repeated).
- 5**: The 'SPD (kn)' column in the 'WayPoints' table.
- 6**: The 'Anchorage (hh:mm)' column in the 'WayPoints' table.

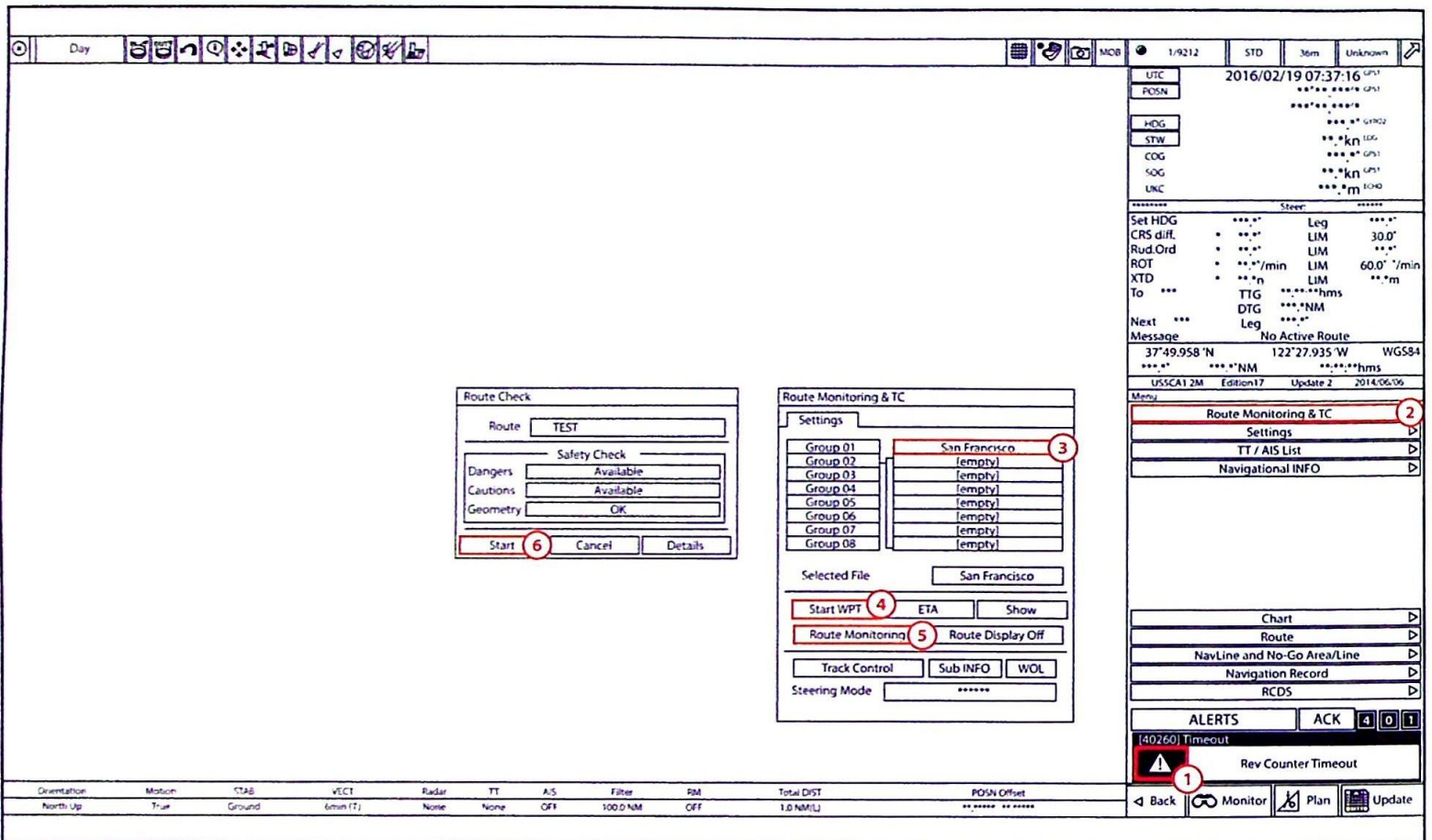
ID	Name	SPD (kn)	DTG (NM)	TTG	Arrival Time	Anchorage (hh:mm)	Departure Time
WPT1		8.0kn	0.0NM		2008/12/10 07:17	00:00	2008/12/10 07:17
WPT2		8.0kn	3.4NM		2008/12/10 08:07	00:00	2008/12/10 08:07
WPT3		8.0kn	10.0NM		2008/12/10 09:12	00:00	2008/12/10 09:12
WPT4		8.0kn	18.7NM		2008/12/10 11:48	00:00	2008/12/10 11:48
WPT5		8.0kn	39.5NM				

- 1** Select 'ETA'.
- 2** Set 'Departure Time'.
- 3** Select 'Show Table'.

- 4** Select 'ETA' again.
- 5** Set speed for each leg.

- 6** If required, set an anchorage time.

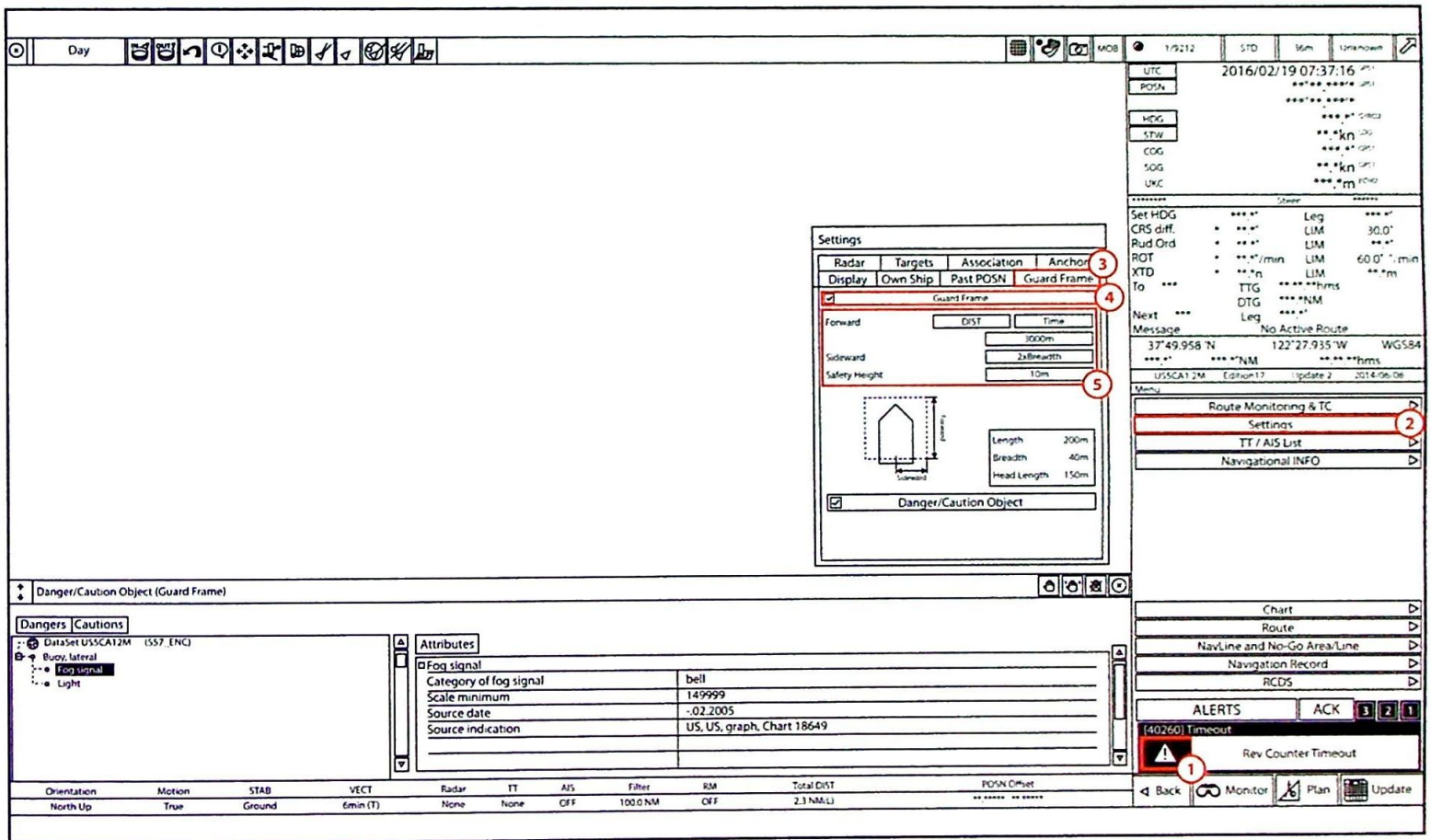
4.4 Selecting Active Route



- 1 Select 'Monitor'.
- 4 Select 'Start WPT'.
- 6 Select 'Start'.
- 2 Select 'Route Monitoring & TC'.
- 5 Once the ship is near the start of the route, select 'Route Monitoring'.
- 3 Select the route.

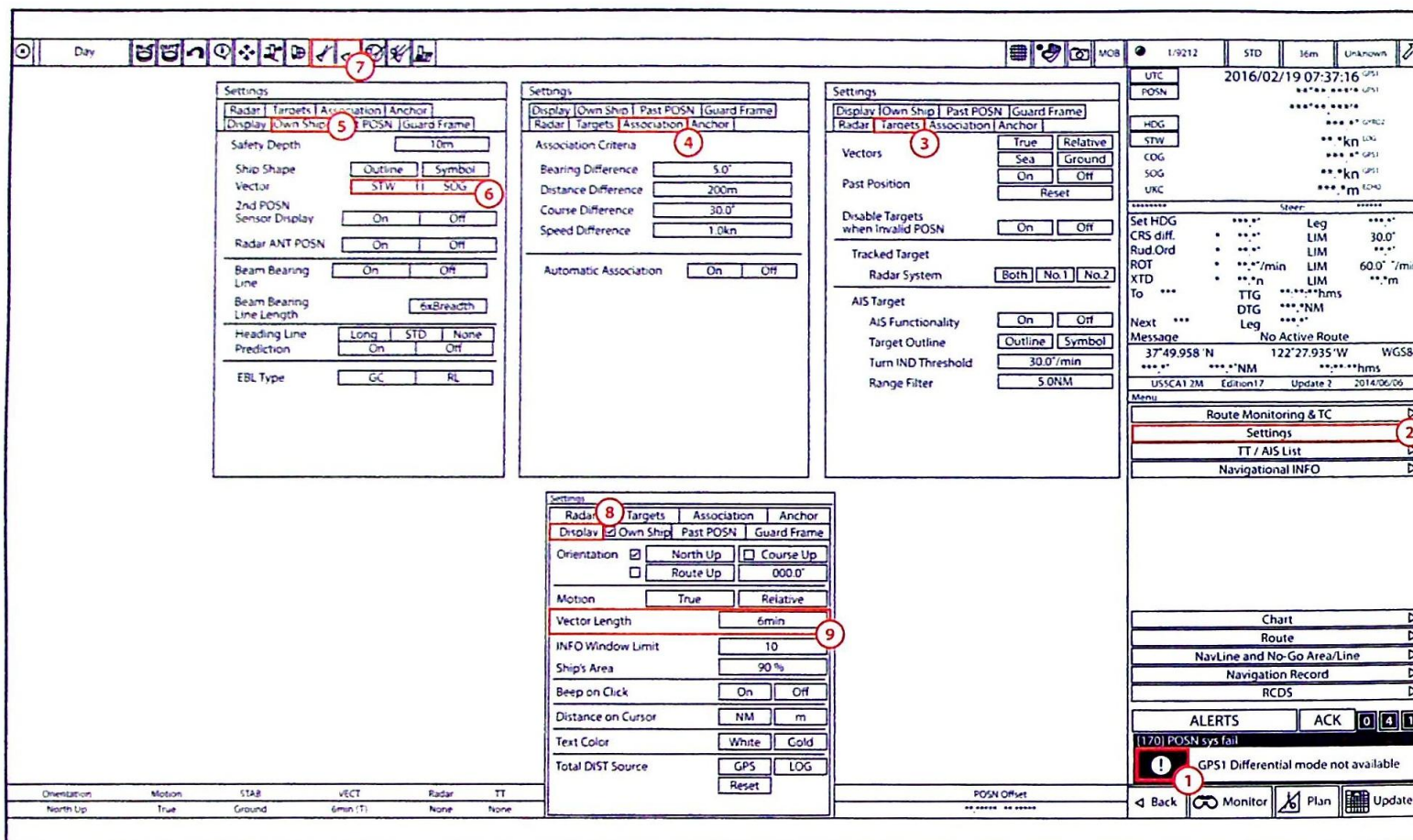
Section 5: Route Monitoring

5.1 Look-Ahead



- 1 Select 'Monitor'.
- 2 Select 'Settings'.
- 3 Select 'Guard Frame'.
- 4 Turn guard frame on/off.
- 5 Set up guard frame, as required.

5.2 TT/AIS/Vectors



- 1 Select 'Monitor'.
- 2 Select 'Settings'.
- 3 Select 'Targets' tab. Configure, as required.

- 4 Select 'Association'. Configure target association, as required.
- 5 Select 'Own Ship'.
- 6 Change vector 'STW/SOG'.

- 7 Activate/deactivate AIS targets.
- 8 Select 'Display' tab.
- 9 Set vector length, as required.

5.3 Position Fixing

The screenshot shows the ECDIS interface with several key components:

- Line of Position List (Top):** A table with columns ID, LAT, LON, Sources, and Discrepancy (m). It lists four entries (EP1-EP4) with their respective coordinates and source combinations.
- Position Menu (Right):** Includes 'Line Of Position' (ON/OFF), 'Mark POSN', 'Mark 2nd POSN', and 'Clear All' buttons.
- Line of Position List (Bottom):** A table with columns ID, LAT, LON, Bearing (°), Distance (NM), and Surveyed Time. It lists three entries (LOP1-LOP3) with their coordinates, bearings, distances, and survey times.
- Status Bar (Bottom):** Shows system parameters like Orientation (North Up), Motion (True), STAB (Ground), VECT (6min (T)), Radar (None), TT (None), AIS (OFF), Filter (100.0 NM), FM (OFF), Total DIST (0.0 NM(L)), and POSN Offset (*****).

1 Select 'Monitor' and then 'Navigational INFO'.

2 Select 'ON' from the 'Line Of Position' menu.

3 Select 'LOP List'.

4 Select 'Add Center'.

5 Add bearing/distance from your own ship position.

a Repeat steps 4 and 5 two more times to get three LOPs.

6 Select 'EP List'.

7 Select the position most suitable for own ship position.

8 Select 'Mark POSN'.

5.4 Logs/Playback Part 1

The screenshot displays the ECDIS interface with several key components:

- Navigation Record Panel:** Contains buttons for 'Log File' (3), 'Screen Shot', 'Active Log' (2016/12/19), 'Show Active Log' (4), 'Show 3 Month Log' (5), and 'History'.
- Log Book (3 Month) Table:** A table with columns: No., Time (UTC), LAT, LON, HDG (*), STW (kn), COG (*), SOG (kn), and Mode. It contains 5 rows of log data.
- Navigation Record Menu:** A dropdown menu with options: 'Route Monitoring & TC', 'Settings', 'TT / AIS List', 'Navigational INFO', 'Chart', 'Route', 'NavLine and No-Go Area/Line', 'Navigation Record' (2), and 'RCDS'.
- Control Panel:** Includes 'ALERTS (+10)', 'ACK', 'Monitor' (1), 'Plan', and 'Update' buttons.

No.	Time (UTC)	LAT	LON	HDG (*)	STW (kn)	COG (*)	SOG (kn)	Mode
1	2016/02/19 07:35:05	*****	*****	***	***	***	***	*****
2	2016/02/09 04:35:25	*****	*****	***	***	***	***	*****
3	2016/02/05 10:08:20	*****	*****	***	***	***	***	*****
4	2016/02/04 08:57:54	37°49.361'N	122°35.576'W	***	***	211.8	1.5	*****
5	2016/02/04 04:57:53	37°46.690'N	122°37.062'W	***	***	291.9	11.8	*****

- 1 Select 'Monitor'.
- 2 Select 'Navigation Record'.
- 3 Select 'Log File'.
- 4 Select 'Show Active Log' to show today's log.

- 5 Select 'Show 3 Month Log' to show a 3 month log.
- 6 Select 'Show History'.
- 7 Example of 3 month log book.

5.4 Logs/Playback Part 2

The screenshot displays the ECDIS interface with the following components:

- Top Bar:** Includes 'Day', 'MOB', 'ALARM', and status indicators for '1/9/12', 'STD', '16m', and 'Unknowns'.
- Navigation Record (Left):** Shows 'Selected File' as 'Active Log', 'Replay Time' as '2008/12/02 - 2008/12/12', and 'Start (UTC)' as '2008/12/02 00:00:00'. It features playback controls (play, stop, fast forward, rewind) and a 'Log List'.
- Navigation Record (Right):** Shows 'Selected File' as 'Replay' and a list of log groups (Group 01 to Group 08) with corresponding dates.
- Log Book (Replay):** A table with columns: No., Time (UTC), LAT, LON, HDG, STW, COG, SOG, DPTH. It contains four rows of log data.
- Map Area:** Shows a chart with a route and 'Navigation Record' selected in the legend.
- Bottom Bar:** Includes 'Orientation' (North Up), 'Motion' (True), 'STAB' (Ground), 'VECT' (6min (1)), 'Radar' (None), 'TT' (None), 'AIS' (ON), 'Route Mon.' (OFF), 'TCS' (OFF), 'Total DIST' (57.8 NML), 'POSH Offset' (*****), and buttons for 'Back', 'Monitor', 'Plan', and 'Update'.

- ① Select 'Plan'.
- ② Select 'Navigation Record'.
- ③ Select 'Replay' tab.

- ④ Select the log you would like to play back.
- ⑤ Select 'Start' and 'End' date.

- ⑥ Use 'Playback Panel' to control playback speed.

Section 6: System Settings

6.1 Warning/Alarm Configuration

Active	Alert Name	A/W/C/I	Limit	Min-Max
<input checked="" type="checkbox"/>	Anchor watch – Anchor watch distance	A	20m	10m – 4000m
<input checked="" type="checkbox"/>	Anchor watch – Anchor watch bearing	A	20°	5° – 90°
<input checked="" type="checkbox"/>	Depth under keel – Depth exceeded the limit	A	7.0m	0.0m – 100.0m
<input checked="" type="checkbox"/>	AIS invalid data – Invalid data	W	-	-
<input checked="" type="checkbox"/>	TT1 invalid data – Invalid data	W	-	-
<input checked="" type="checkbox"/>	TT2 invalid data – Invalid data	W	-	-
<input checked="" type="checkbox"/>	Timeout	W	20sec	3sec – 20sec
<input type="checkbox"/>	Position jumped	W	200m	200m – 1000m

ID	Alert Name	Parameter	Source	Activated Time	Acknowledged Time	ACK
40260	Timeout	Rev Counter Timeout	ECDIS	2016/03/02 07:08:10	2016/03/02 07:13:57	
170	POSN Sys Err	GPS2 Differential mode not available	ECDIS	2016/03/02 07:08:41	2016/03/02 07:13:56	
170	POSN Sys Err	GPS1 Differential mode not available	ECDIS	2016/03/02 07:08:41	2016/03/02 07:13:56	
40102	Integrity Err	Integrity monitoring impossible heading	ECDIS	2016/03/02 09:23:35	2016/03/02 09:23:43	
173	Cross Area	Crossing area with special condition	ECDIS	2016/03/02 09:22:17	2016/03/02 09:22:18	
40102	Sys Err Failure	Connection error of CD/DVD-ROM drive	ECDIS	2016/03/02 07:08:29	2016/03/02 07:08:29	

1 Select 'ALERTS' to view the alerts window.

2 Select 'Active Alerts'.

3 Example of alerts.

4 Select 'Limit'.

5 Configure limits, as necessary.

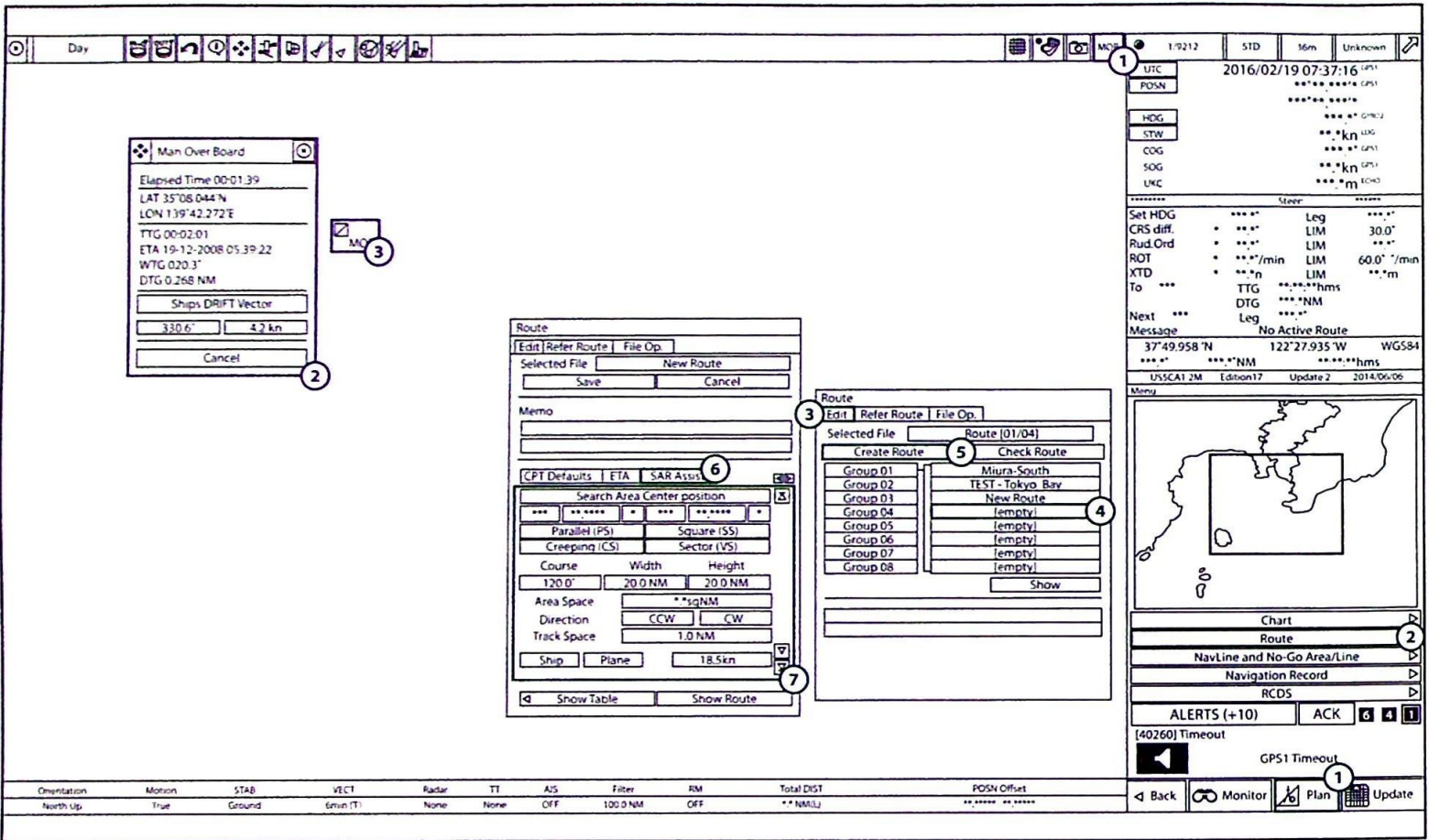
6.2 Position/Heading/Speed

- 1 Select 'POSN' to open position sensor information.
- 2 Position sensor settings.
- 3 If 'DR' is selected, enter position.
- 4 Select 'HDG' to open heading sensor information.

- 5 Heading sensor settings.
- 6 If 'Manual' is selected, enter heading.
- 7 Select 'STW' to open speed sensor information.

- 8 Speed sensor settings.
- 9 If 'Manual' is selected, enter speed.

6.3 Emergency Menus



- 1 Select 'MOB'.
- 2 Man Over Board information window.
- 3 Example of an MOB marker.

- 1 Ensure 'Plan' mode is selected.
- 2 Select 'Route'.
- 3 Select 'Edit'.
- 4 Select empty group.

- 5 Select 'Create Route'.
- 6 Select 'SAR Assist'.
- 7 Configure the search parameters and select 'Apply'.

6.4 Manual/About

The screenshot shows the ECDIS software interface. At the top, there is a toolbar with various icons and a status bar. The main display area is mostly blank. On the right side, there is a data panel showing UTC time (2016/02/19 07:37:16), POSN, HDG, STW, COG, SOG, and URC. Below this, there is a 'Set HDG' section with various parameters like CRS diff, Rud Ord, RDT, XTD, To, Next, and Message. The bottom right corner shows an 'ALERTS' section with a warning icon and the text 'Crossing safety contour'. At the bottom of the screen, there is a status bar with various parameters like Orientation, Motion, STAB, VECT, Radar, TT, AIS, Filter, RM, Total DST, and POSN Offset.

The 'Maintenance' window is open in the center, showing a table with three tabs: 'Network', 'TCS', and 'System'. The 'System' tab is selected, and it contains a table with the following data:

Network	TCS	System
Sentences	Self Test	Version
EC-8000/K		
C-Map SDK		
RCDS SDK		
Pres. Library		
Operation Panel		
Pilot Control		
LCD Status		
Model		JH19T12TKDAAEAAAA
Serial Number		
EVX Version		E1.51.00
ECOM Version		SW100066-1G09
Elapsed Time		19907h
Temp. Sensor		37.0°C
Back Light		250

Red callouts are present: '1' points to the 'Update' button in the bottom right corner; '2' points to the 'Maintenance' menu item in the right-hand menu; '3' points to the 'Version' tab in the Maintenance window.

1 Select 'Update'.

2 Select 'Maintenance'.

3 Select 'Version' tab and review information in the version window.

19. Totem ECDIS – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Basic Menu Line		
	Mode		Std Disp
	View		Brightness
	Range/Scale Field		Tree
	Set Centre		Navigation Data Line
	VRM		
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Main Menu		
	Tools		Mariner Objects
	Toolbar		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	View		
	Presentation Parameters		Show Soundings (ON/OFF)
	Show Scale Boundaries (ON/OFF)		Safety Contour (m)
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Route Planning		
	Default Measurement Type		Disable RTE MSGs from GPS (ON/OFF)
	Reached Waypoint Criteria		Automatically add new waypoints to library (ON/OFF)
	Pre Run Distance (Meters)		Visual Route Information
	Default Route Values		Planned Position Interval
	Import route/WPT from GPS		
	New Route		
6.	Route Monitoring Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.		
	Setup		
	Targets		Serial Devices
	Own Ship		COLREGs
	Past Track		Charts and Navigation
	Lost Target Alarm (ON/OFF)		Highlight Danger Objects in Guard Zone (ON/OFF)
	Show Active AIS Track (ON/OFF)		Display Past Track (ON/OFF)
	Vector Stabilization		
7.	Chart Updating The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.		
	Manual Updates		Chart Catalog
	S63 Manager (AVCS/Primar)		Database In View
	Generate User Permit		

Totem ECDIS – Familiarisation Checklist (Page 2 of 2)

8.	<p>System/Local Sensors Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.</p> <p>Sensor Settings</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">System Sensors</td> <td style="width: 50%;">2nd Position Sensor</td> </tr> <tr> <td>Set Gyro</td> <td>Speed Sensor</td> </tr> <tr> <td>Position Sensor</td> <td>Date/Time</td> </tr> </table>	System Sensors	2nd Position Sensor	Set Gyro	Speed Sensor	Position Sensor	Date/Time
System Sensors	2nd Position Sensor						
Set Gyro	Speed Sensor						
Position Sensor	Date/Time						
9.	<p>System Alerts Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.</p> <p>Main Menu</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Targets</td> <td style="width: 50%;">Alarms</td> </tr> </table>	Targets	Alarms				
Targets	Alarms						
10.	<p>System Units Become familiar with the system's logbook, records, data storage and configuration set up.</p> <p>System</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Setup</td> <td style="width: 50%;"></td> </tr> </table>	Setup					
Setup							
11.	<p>ECDIS Operator's Manual Locate the system's operator's user guide for referencing and help.</p> <p>Help</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table>						

20. Wärtsilä SAM MULTIPILOT NACOS Platinum/ECDISPILOT NACOS Platinum – Familiarisation Checklist (Page 1 of 2)

1.	Company ECDIS Procedures Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.		
2.	Chart Display Become familiar with the basic chart functionality from the main display.		
	Main Chart Display		
	Title Bar		Menu Bar
	Navigation Sidebar		Settings Menu
	Top Alert Line		Context Menus
	Tools Sidebar		
3.	Navigational Tools Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.		
	Navigation Sidebar		
	Display		Anchor Watch
	Course Up		EBL and VRM
	True Motion		LOP
	Heading and Speed		MOB Drift
	Position WGS-84		Pilotage
	Vector and Trials		User Symbols
	Charts		Routes
	ENC		Targets
	Targets		
	Fusion		
	Tools Sidebar		
	AIS		
	Display		
4.	Chart Display Settings Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.		
	Presentation		
	Chart		Own Ship
	Spot soundings (deep) (ON/OFF)		Past Track (ON/OFF)
	Advanced		True Scaled Outline (ON/OFF)
	Accuracy Symbols		Route
	Scale Dependent		Target
	Date Dependent Display Features		ARPA (ON/OFF)
	Depth Contour		True Motion
	ECDIS Hazards		User Symbols
	Show navigation hazards ahead on chart (ON/OFF)		
5.	Route Planning Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.		
	Routes		Presentation
	Route Explorer		Route
	Voyage Monitoring		

Wärtsilä SAM MULTIPILOT NACOS Platinum/ECDISPILOT NACOS Platinum – Familiarisation Checklist (Page 2 of 2)

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Presentation		Tools Sidebar	
Own Ship		AIS	
Past Track (ON/OFF)		Alarms	
Route		Display	
Show Wheel Over (ON/OFF)		Navigation Tools	
Target		Routes	
True Motion		Targets	
True Motion Reset			
Navigation Sidebar			
Display			
Vector and Trails			
Targets			

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Super Home			
Maintenance			
Nautical Charts			

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

Sensors			
Draught		Position	
Heading		Depth	
STW		Sensor Priorities	
SOG			

9. System Alerts

Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.

Top Alert Line		Settings Menu	
Silence		Depth Alerts	
ACK		ECDIS Alerts	
Alerts		Navigation hazard ahead caution (ON/OFF)	
Cautions		Look Ahead Sector	
		Show on chart (ON/OFF)	
		Guard Zones	
		Targets	

10. System Units

Become familiar with the system's logbook, records, data storage and configuration set up.

Menu Bar			
ECDIS		About	
Conning		Screen Snapshot	
VDR		Super Home	
Maintenance		Favourite	
Service		Man Over Board	

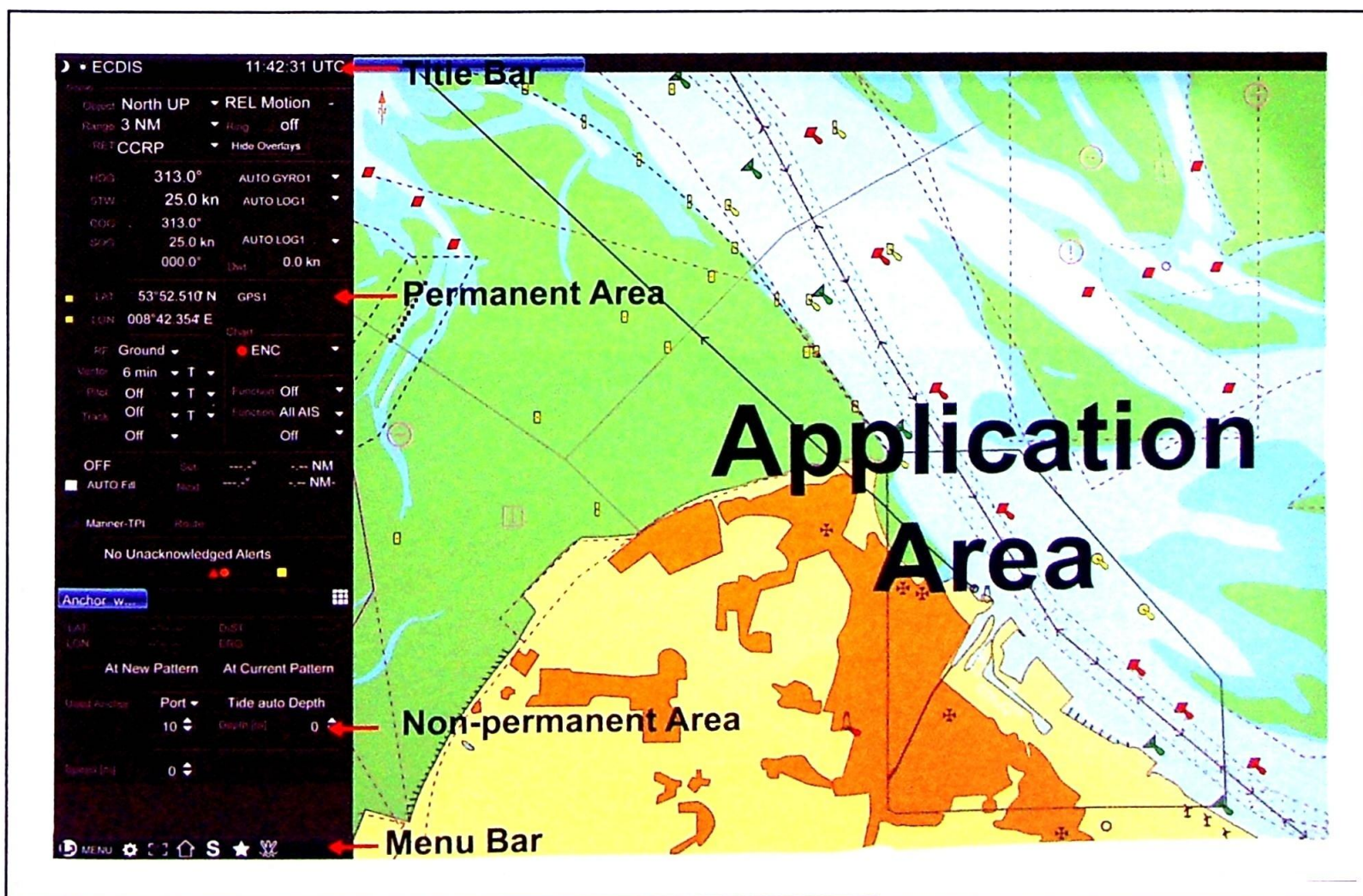
11. ECDIS Operator's Manual

Locate the system's operator's user guide for referencing and help.

Super Home			
Take the Tour		Read Documentation	

Wärtsilä SAM MULTIPILOT NACOS Platinum/ECDISPILOT NACOS Platinum

Key Wärtsilä SAM MULTIPILOT NACOS Platinum/ECDISPILOT NACOS Platinum ECDIS Menu Functions		
1.	View list of installed Charts	Super Home menu>Maintenance>Nautical Charts or Data Base
2.	View the latest update number installed	Right click in application area>Chart Information
3.	Change Chart Settings	Settings>Chart
4.	View information on charted objects and view additional text	Right click>Chart Information
5.	Set the Safety Depth, Safety Contour, Shallow and Deep Contour	Settings>Depth Contour
6.	Input a User Symbol	Tools>User Symbols
7.	Input a Manual Update	Super Home menu>Nautical Charts>select chart>Right click>Manual Update Editor
8.	Turn EBL/VRM on	Tools>EBL and VRM
9.	Configure the Look-Ahead Sector	Settings>ECDIS Alerts
10.	Configure Ship's Track	Sidebar>Permanent Area>Vector and Trails
11.	Configure Velocity Vectors	Sidebar>Permanent Area>Vector and Trails
12.	View Logbook	Super Home menu>Voyage Replay
13.	Input a Visual or Radar Fix	Right click>Create LOP
14.	Configure Radar Image	Menu>Info>Radar Image
15.	View Alarm List	Sidebar>Permanent Area>Alerts...





A B C D E F G

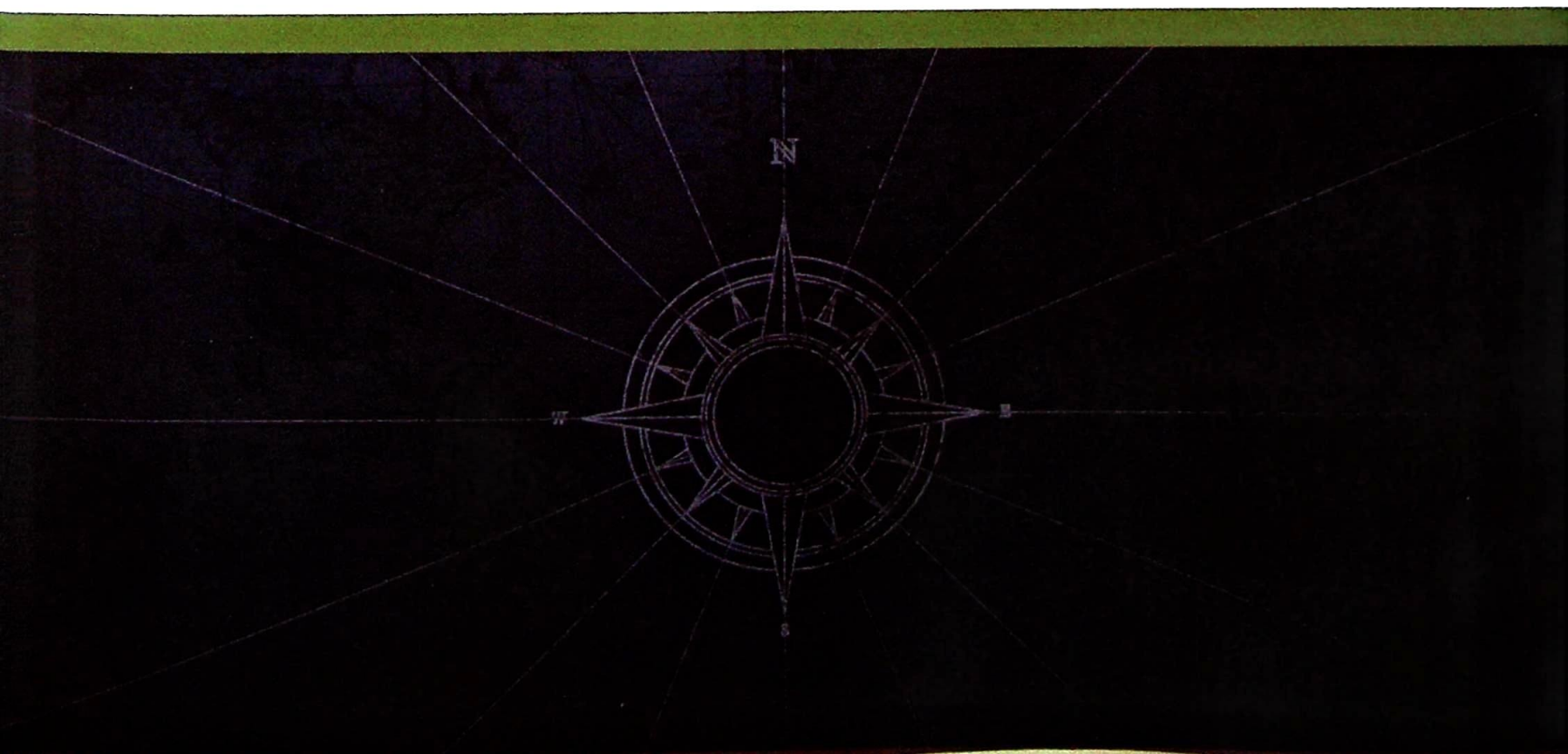
- A – Menu
- B – Settings Bar
- C – Screen Snapshot
- D – Super Home
- E – S-Mode
- F – Favourite Settings
- G – Man Overboard Button

Wärtsilä SAM

MULTIPILOT NACOS Platinum

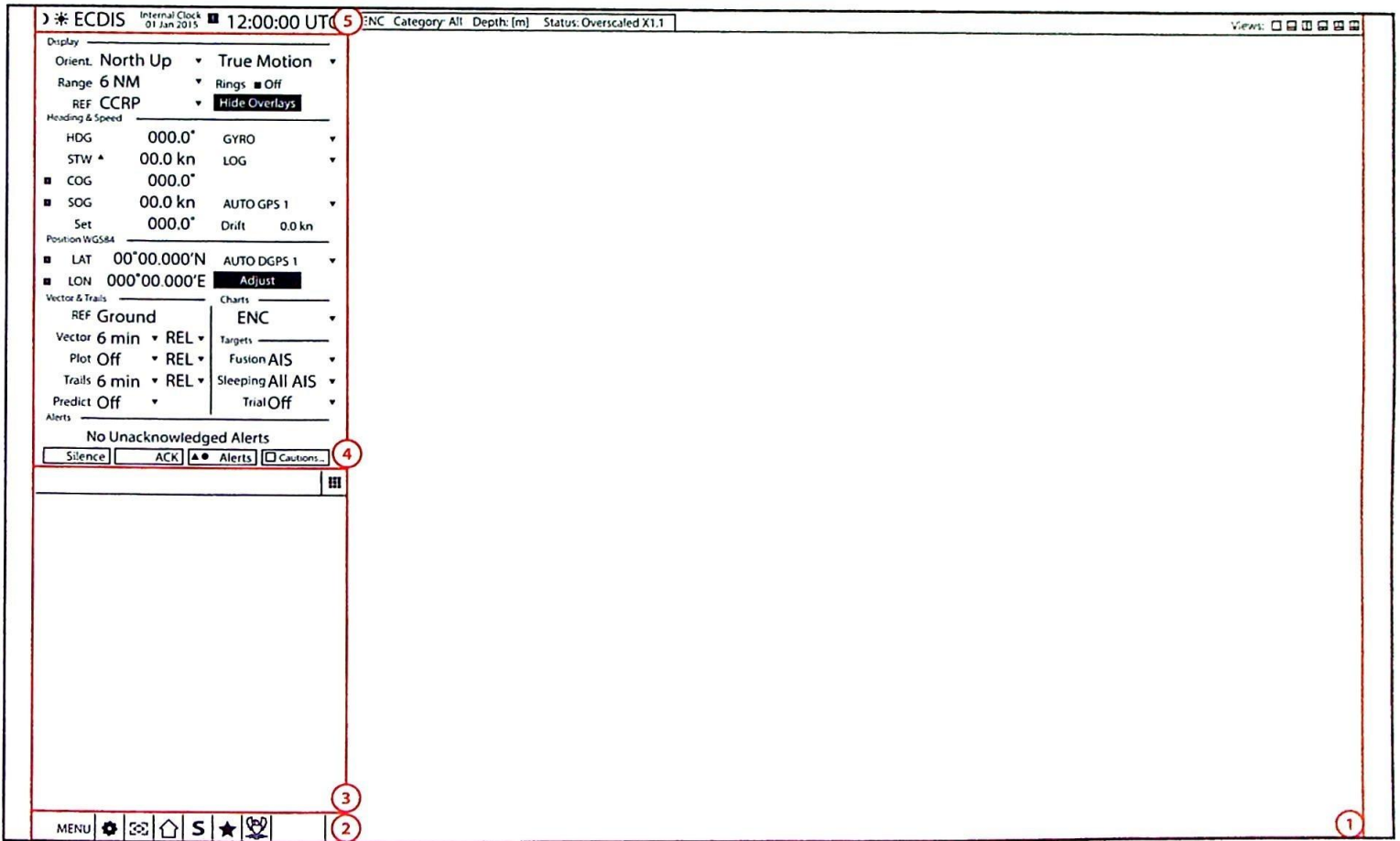
ECDISPILOT NACOS Platinum

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Section 1: Main Display

1.1 Screen Layout



1 Application area

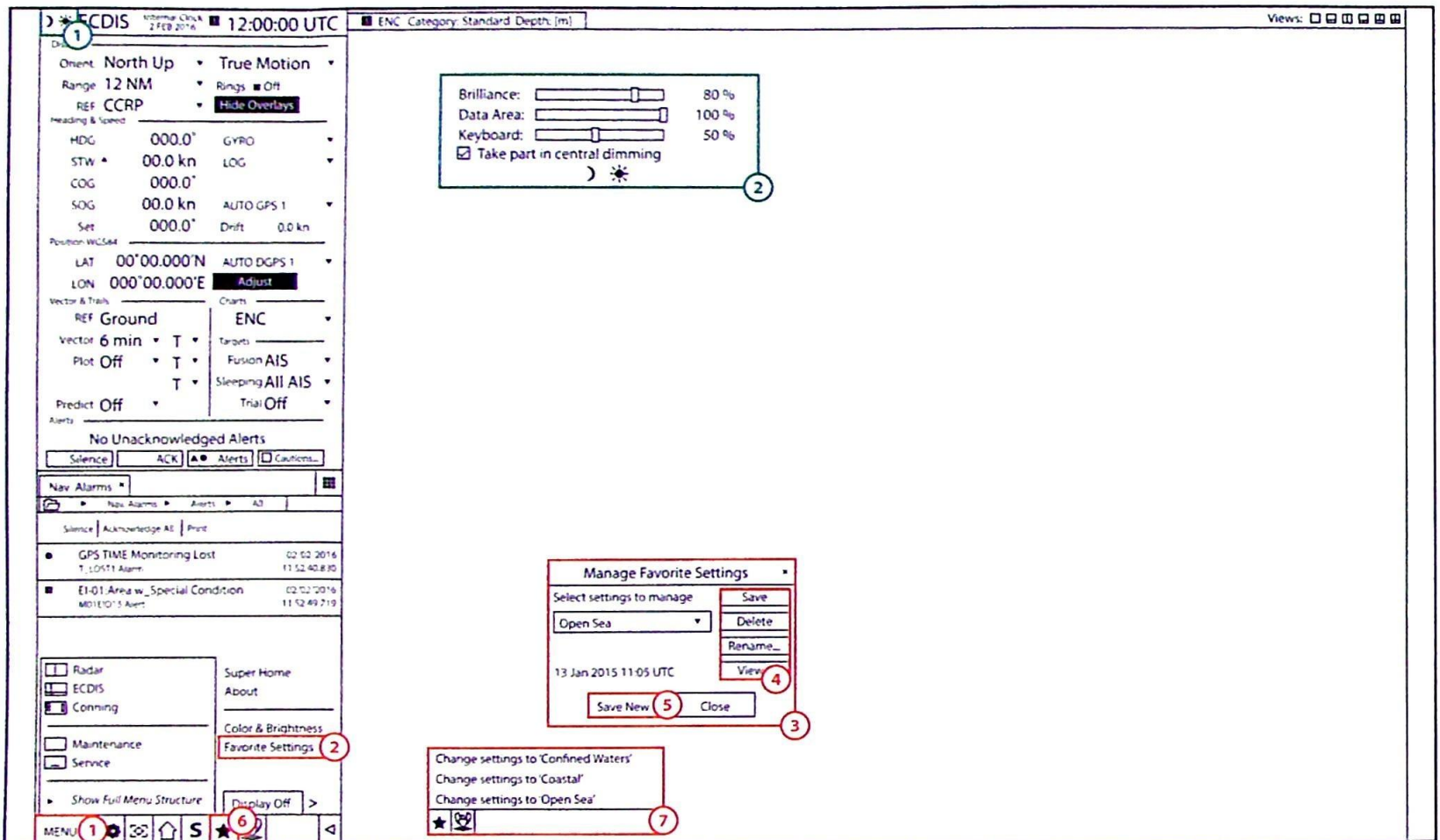
3 Tools sidebar

5 Title bar

2 Menu bar

4 Navigation sidebar

1.2 Colour Palette/Profiles



- 1 Click 'MENU' to reveal the main menu options.
- 2 Click 'Favorite Settings'.
- 3 The 'Manage Favorite Settings' window is displayed.
- 4 Edit existing settings using any of these options.

- 5 Click 'Save New...' to create a new favourite setting.
- 6 Click the star symbol to show all of your favourite settings.
- 7 Select one of your favourite settings from the list.

- 1 Left click on the moon/sun to switch between colour schemes, or right click to open the window in step 2.
- 2 Use the scroll bars to change settings and the colour scheme will adjust accordingly.

1.3 Range/Scale/Motion

The screenshot shows the ECDIS interface with the following settings:

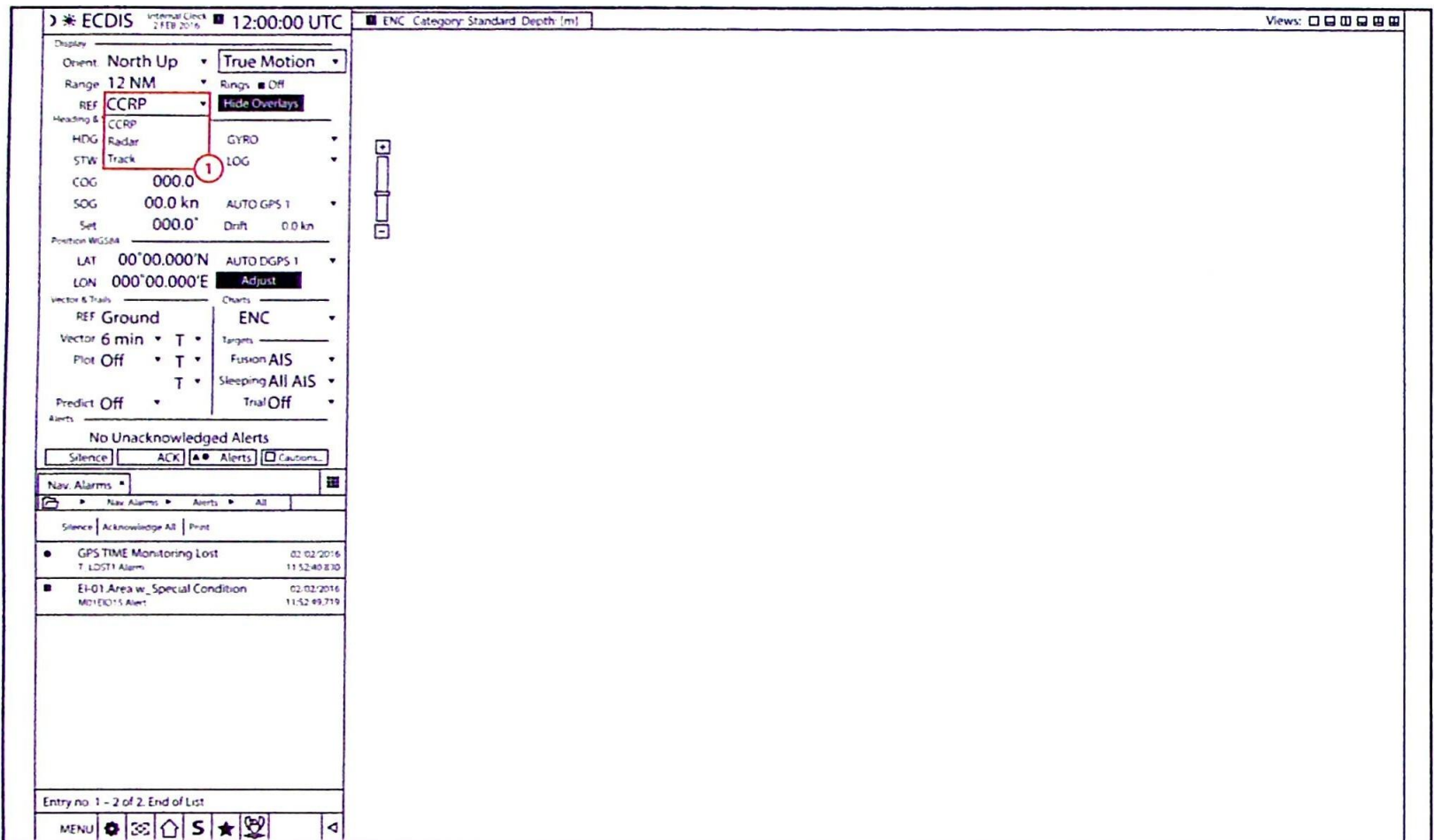
- Internal Clock: 2 FEB 2016
- Time: 12:00:00 UTC
- ENC Category: Standard Depth. [m]
- Display:
 - Orient: North Up
 - Range: 12 NM
 - REF: 250 m
 - Heading &: 500 m
 - HDG: 0.25 NM
 - STW: 0.50 NM
 - COG: 0.75 NM
 - SOG: 1.5 NM
 - Set: 3 NM
 - Position W: 6 NM
 - LAT: 12 NM
 - LON: 24 NM
 - Vector & Tr.: 48 NM
 - REF Ground: 96 NM
 - Vector: 6 min
 - Plot: Off
 - Predict: Off
 - Alerts: No Unacknowledged Alerts
- Navigation:
 - Nav. Alarms: Silence, ACK, Alerts, Cautions...
 - Nav. Alarms: Alerts, All
 - Silence, Acknowledge All, Print
 - GPS TIME Monitoring Lost: 02/02/2016 11:52:40.830
 - EI-01:Area w_ Special Condition: 02/02/2016 11:52:49.719
- Entry no. 1 - 2 of 2. End of List
- Buttons: MENU, Home, S, Star, etc.

1 Use the scale bar to zoom in and zoom out.

2 Click the dropdown to select 'True Motion' or 'Relative Motion'.

3 Click the dropdown to select a manual viewing range.

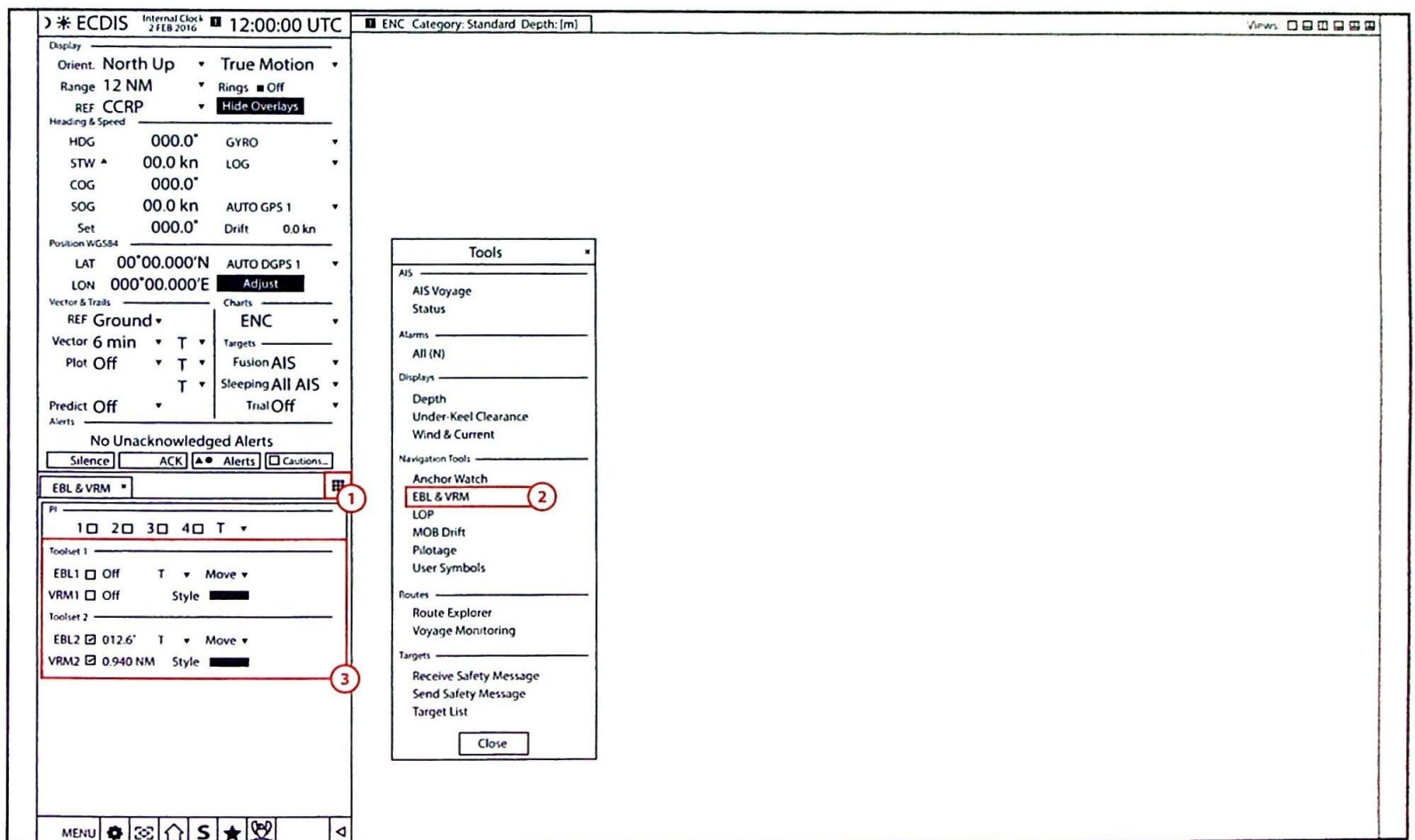
1.4 Setting CCRP



1 From the navigation sidebar, select 'REF' to choose the reference point on your ship that is used for calculation of the system data.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



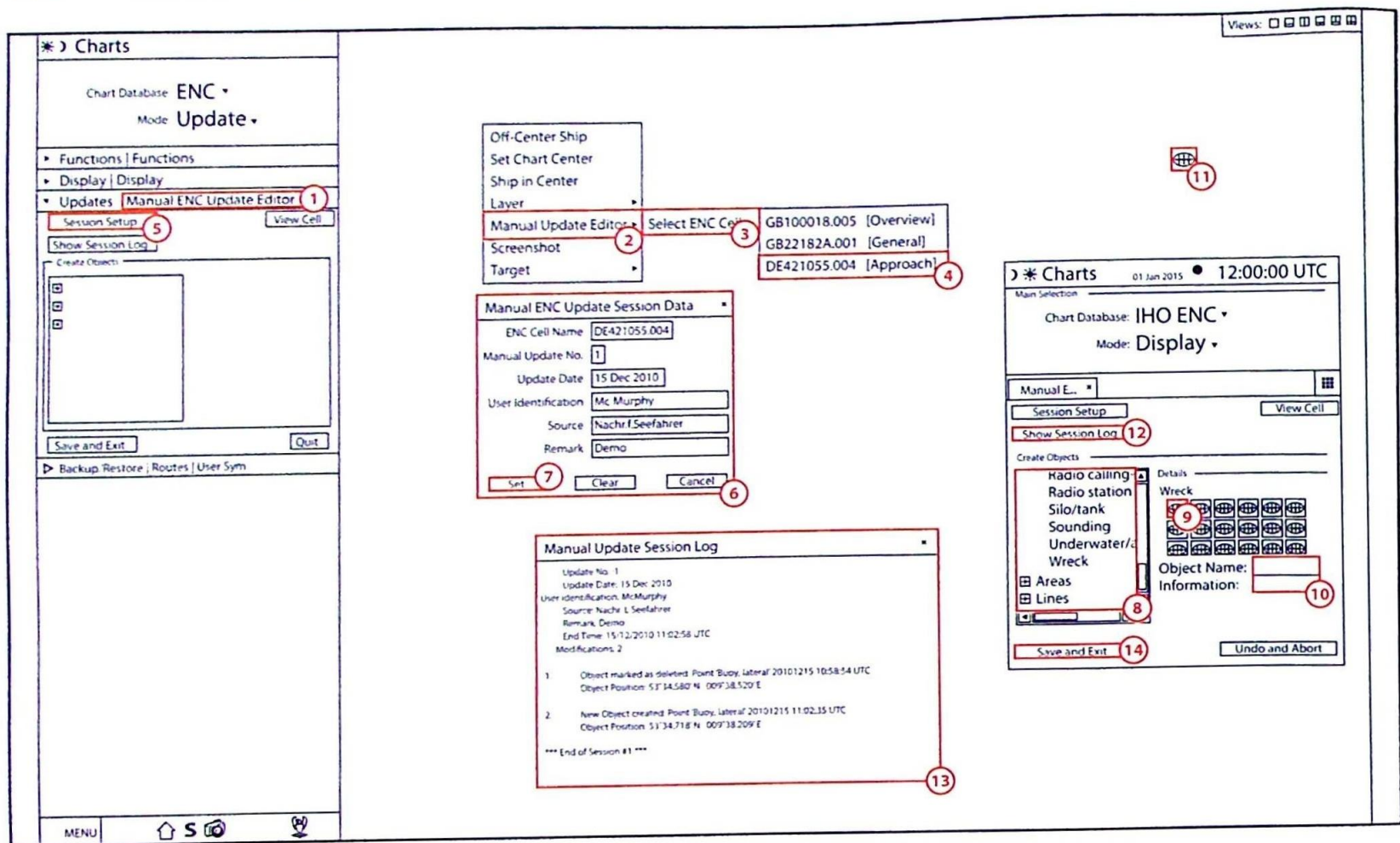
1 Click 'Tools'.

2 Click 'EBL & VRM'.

3 From the 'EBL & VRM' tab, enable EBL/VRMs as required.

a To adjust EBL/VRM, move the cursor onto the handle and move as required.

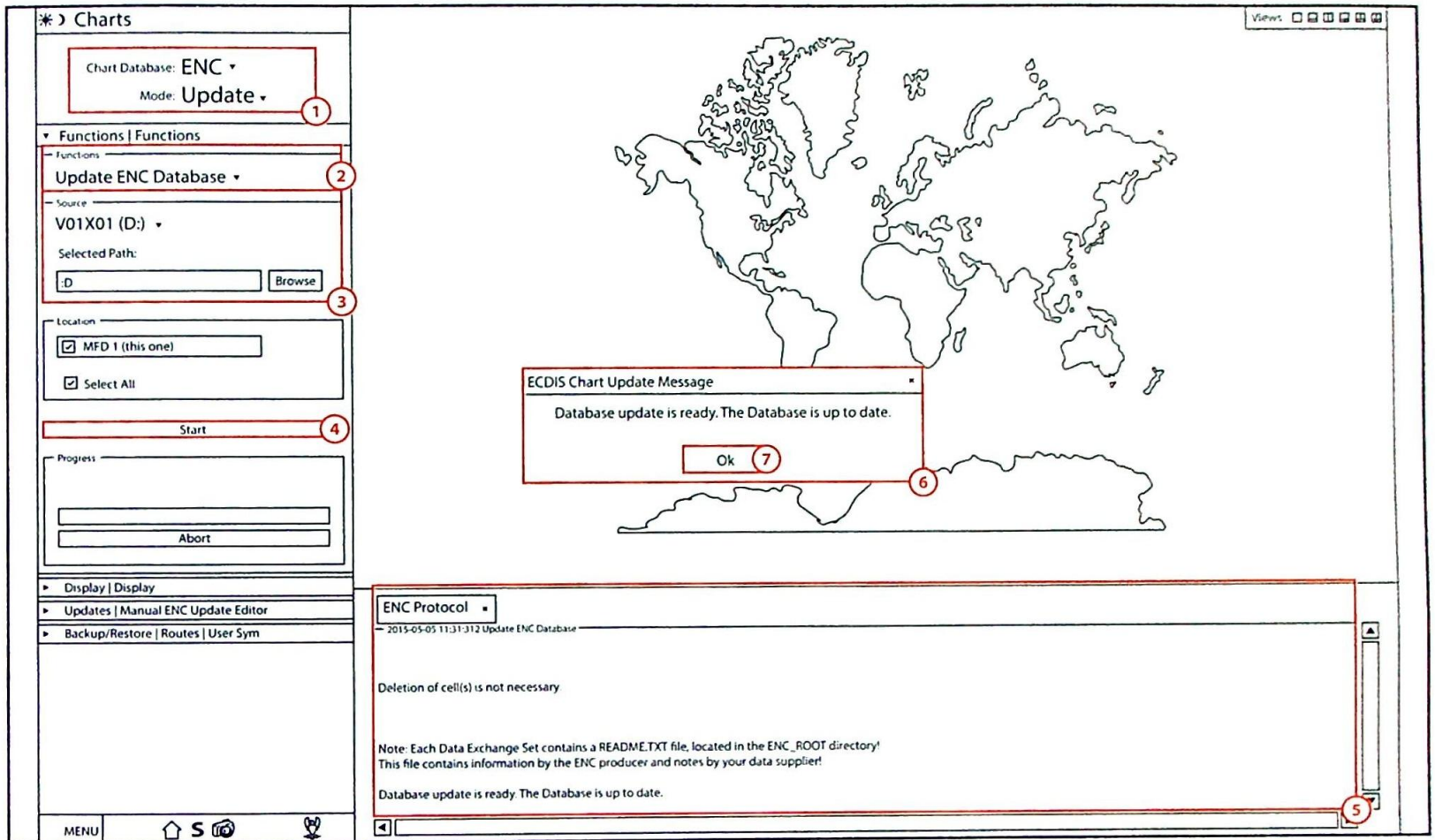
2.2 Manual Corrections



Note to user: To begin this process, you must first enter 'Super Home' and then select 'Nautical Charts'.

- 1 Select 'Manual ENC Update Editor' from the dropdown.
- 2 Zoom in on the required chart, right click to show the context menu and click 'Manual Update Editor'.
- 3 Click 'Select ENC Cell'.
- 4 Select the chart to which you would like to apply the manual update.
- 5 Click 'Session Setup'.
- 6 The 'Manual ENC Update Session Data' window will open, allowing you to configure your settings.
- 7 Click 'Set'.
- 8 Find/select the symbol you would like to insert onto the chart.
- 9 Select the type of symbol you would like to use.
- 10 Configure the symbol settings.
- 11 Place the symbol on the chart.
- 12 Click 'Show Session Log'.
- 13 A log of the changes made during the update session is displayed.
- 14 Click 'Save and Exit' to finish.

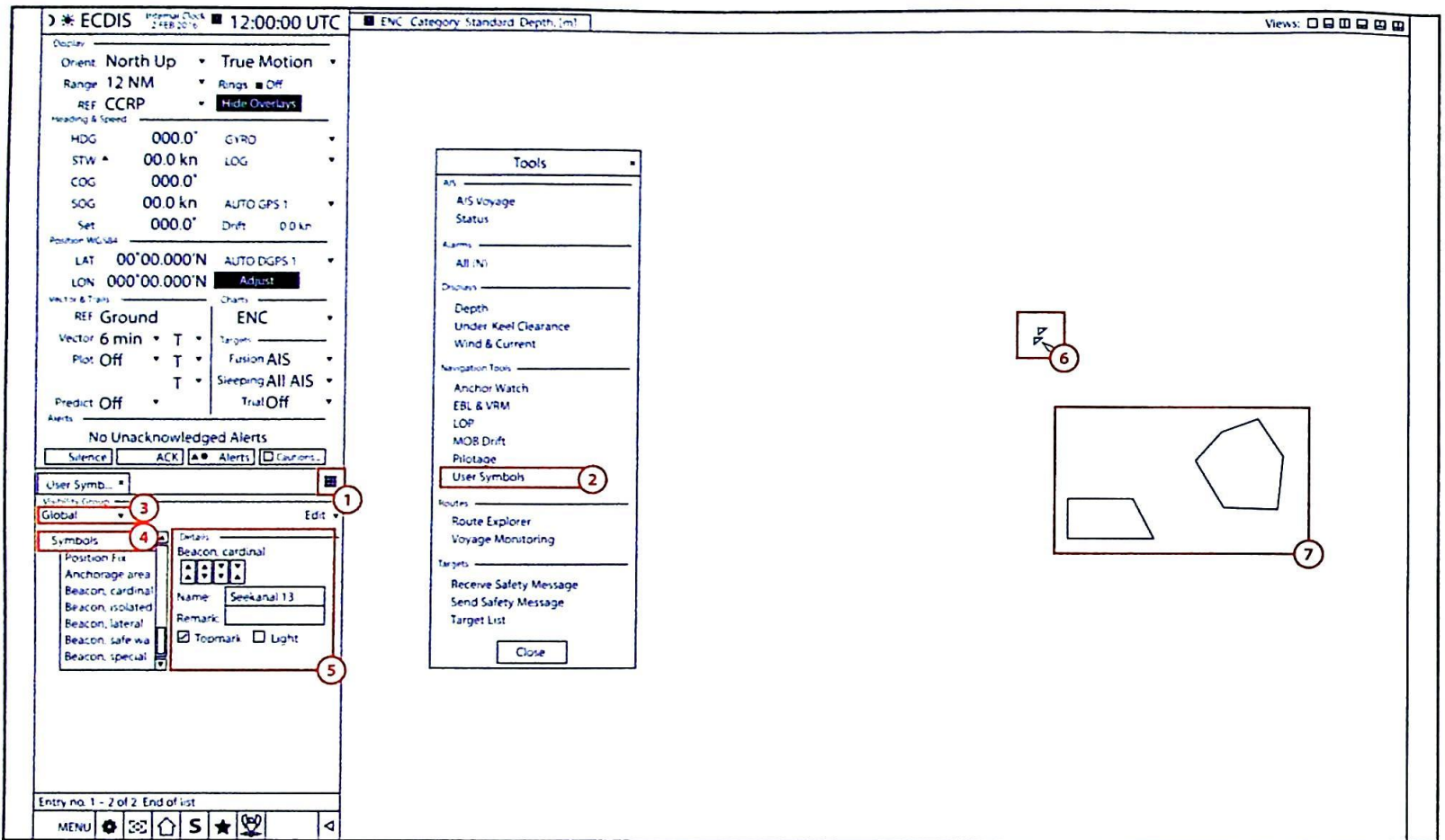
2.3 Chart Updates



Note to user: To begin this process, you must first enter 'Super Home' and then select 'Nautical Charts'.

- 1 Select 'ENC' from the Chart Database dropdown and 'Update' from the Mode dropdown.
- 2 Select 'Update ENC Database' from the Functions dropdown.
- 3 Select the Source.
- 4 Click 'Start'.
- 5 The 'ENC Protocol' box will show progress of the updates.
- 6 Once updates have finished, the 'ECDIS Chart Update Message' will appear.
- 7 Click 'Ok'.

2.4 No Go Areas/User Charts



1 Click to open the 'Tools' menu.

2 Select 'User Symbols'.

3 Select a 'Visibility Group'.

4 Select the type of symbol you would like to use from the list, ie:

a Symbols

b Areas

c Lines

d Events/text

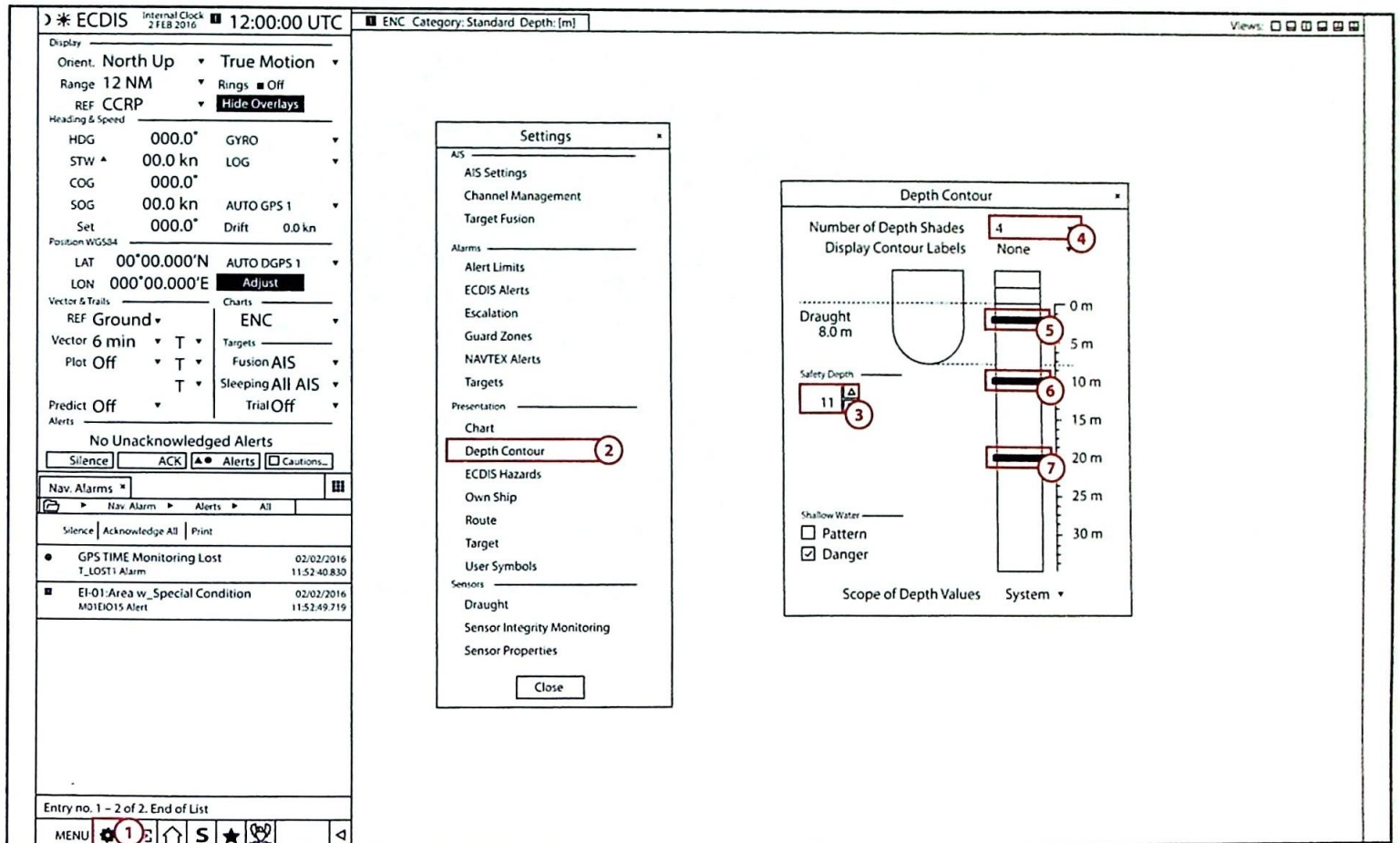
5 Select any additional settings you would like to add to your symbol.

6 Place the symbol onto the chart.

7 Example of area symbols.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour



- 1 Click the settings icon.
- 2 Click 'Depth Contour'.
- 3 Set a Safety Depth.
- 4 Select 4 shades or 2 shades from the dropdown.
- 5 Set your Shallow Contour.
- 6 Set your Safety Contour.
- 7 Set your Deep Contour.

3.2 Display Preference Options

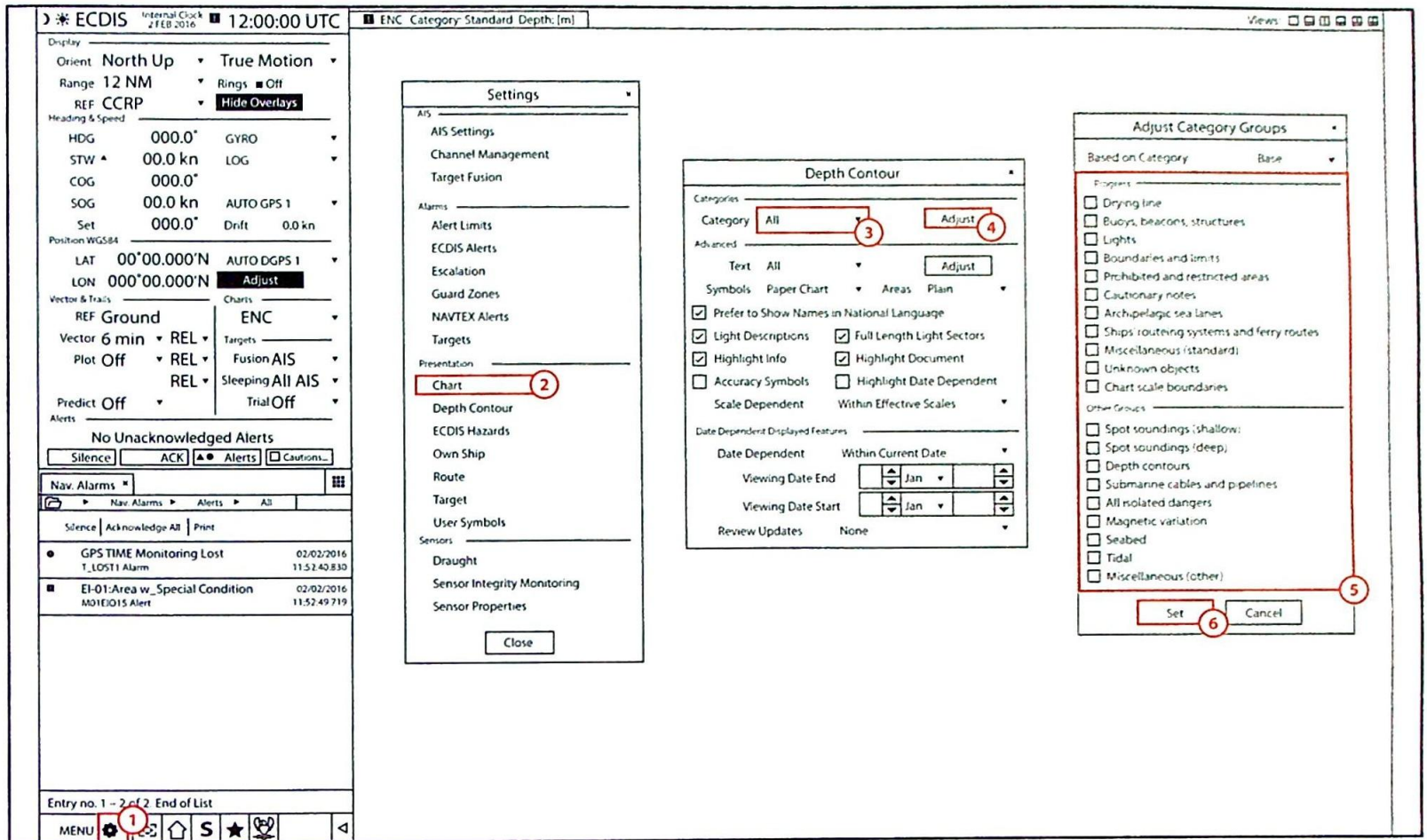
The screenshot shows the ECDIS interface with the following components:

- Main Display:** Shows vessel information (Orient North Up, Range 12 NM, REF CCRP), heading and speed (HDG 000.0°, STW 00.0 kn, COG 000.0°, SOG 00.0 kn), position (LAT 00°00.000'N, LON 000°00.000'E), and vector/plot settings (REF Ground, Vector 6 min, Plot Off).
- Settings Dialog:** A central dialog box with a 'Chart' option highlighted by a red circle (2). Other options include AIS Settings, Channel Management, Target Fusion, Alarms, Alert Limits, ECDIS Alerts, Escalation, Guard Zones, NAVTEX Alerts, Targets, Presentation, Depth Contour, ECDIS Hazards, Own Ship, Route, Target, User Symbols, Sensors, Draught, Sensor Integrity Monitoring, and Sensor Properties.
- Depth Contour Dialog:** A dialog box with 'Depth Contour' in the title. It includes 'Categories' (All), 'Advanced' (All), 'Symbols' (Paper Chart, Areas Plain), and 'Date Dependent Displayed Features' (Date Dependent, Within Current Date). The 'Date Dependent' section has 'Viewing Date End' and 'Viewing Date Start' set to Jan. The 'User Symbols' section has checkboxes for Temporary Notices, Preliminary Notices, No Information Objects, and Show Names of Objects.

- 1 Click on settings.
- 2 Click on 'Chart'.

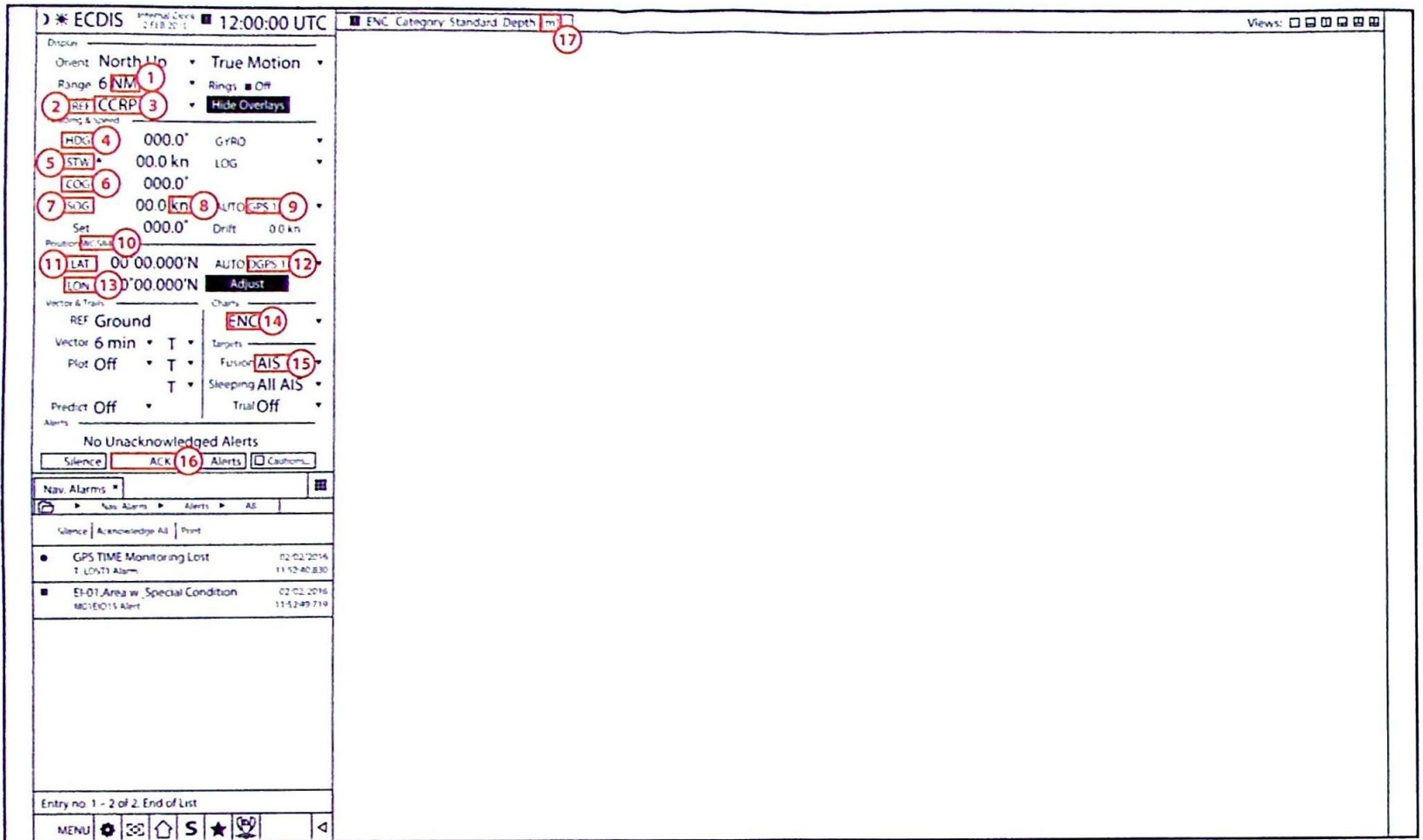
- 3 Adjust SENC features (display preference), as necessary.

3.3 Display Configuration



- 1 Click settings.
- 2 Click 'Chart'.
- 3 Change the category to 'Custom'.
- 4 Click 'Adjust'.
- 5 Manually select layers.
- 6 Click 'Set' to finish.

3.4 Abbreviations



1 Nautical Miles

2 Reference

3 Continuous Common Reference Point

4 Heading

5 Speed Through Water

6 Course Over Ground

7 Speed Over Ground

8 Knots

9 Global Positioning System

10 World Geodetic System 1984

11 Latitude

12 Differential Global Positioning System

13 Longitude

14 Electronic Navigational Chart

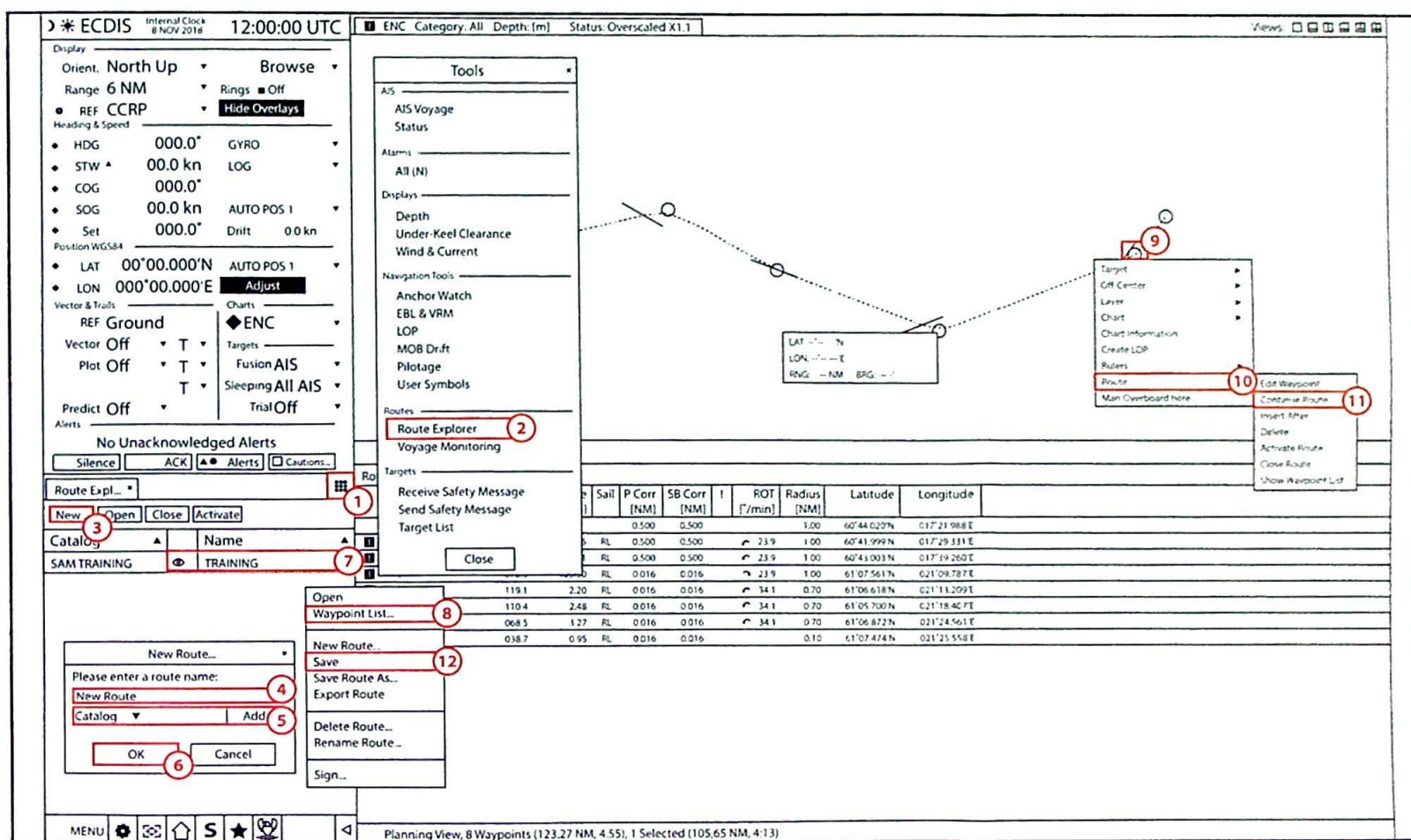
15 Automatic Identification System

16 Acknowledge

17 Metres

Section 4: Route Planning

4.1 Creation



- 1 Click 'Tools'.
- 2 Click 'Route Explorer'.
- 3 Click 'New...'.
- 4 Enter a name for the route.
- 5 Select 'Catalog' or add new catalog.
- 6 Click 'OK'.
- 7 Right click on the route.
- 8 Click 'Waypoint List...' to bring up the waypoint list.
- 9 Right click on the waypoint.
- 10 Click 'Route'.
- 11 Click 'Continue Route', then move the cursor to the desired location and click.
- 12 To save the route, right click on it and select 'Save'.

4.2 Schedule/Route Checking

The screenshot shows the ECDIS interface with the following elements:

- Left Sidebar:** Contains various settings such as Orientation (North Up), Range (6 NM), REF (CCRP), HDG (000.0°), STW (00.0 kn), COG (000.0°), SOG (00.0 kn), and Position (00°00.000'N, 000°00.000'E).
- Main Display:** Shows a route table with columns for No., Name, B/W, Distance, Sail, P Corr, SB Corr, ROT, Radius, Latitude, and Longitude.
- Check Route Dialog:** A dialog box titled 'Check route: Around' is open, showing a progress bar and a table of issues. The table has columns for 'Issue' and 'Source'. One issue is highlighted: 'Restricted area on route (entry restricted/speed restricted)' with source 'ENC'.
- Annotations:** Red circles and arrows indicate the sequence of actions: 1. Clicking 'Route' in the sidebar, 2. Clicking 'Check Route' in the dialog, 3. The progress bar in the dialog, 4. Clicking 'Center Chart Here' for a specific issue, and 5. Hovering over an issue in the table.

No.	Name	B/W	Distance [NM]	Sail	P Corr [NM]	SB Corr [NM]	ROT [°/min]	Radius [NM]	Latitude	Longitude
1	Initial waypoint				0.500	0.500		1.00	60°44.020'N	017°21.988'E
2		119.3	3.76	RL	0.500	0.500	23.9	1.00	60°41.999'N	017°29.331'E
3		078.3	5.31	RL	0.500	0.500	23.9	1.00	60°43.003'N	017°39.260'E
4		076.5	105.30	RL	0.016	0.016	23.9	1.00	61°07.561'N	021°09.787'E
5		119.3	2.20	BL	0.016	0.016	34.1	0.00	61°06.638'N	021°11.299'E
									021°18.407'E	
									021°24.561'E	
									021°25.558'E	

- 1 Click 'Route'.
- 2 Click 'Check Route'.
- 3 Route check is being carried out.

- 4 In the 'Check Route' results box, right click on a danger/warning and click 'Center Chart Here'.

- 5 Hover the cursor here to view additional information from the 'Check' results.

4.3 Optimisation

The screenshot shows the ECDIS interface with the 'Edit Waypoint' dialog box open for Waypoint 8. The dialog includes fields for Name, Lat, Lon, Radius, and Arrival Point (ETA, Offset, Tolerance). The 'Planned Speed' table is visible, showing a list of waypoints with their respective distances and speeds. The 'ETA Calculator' and 'Setting Planned Speed' sections are highlighted in red.

No.	Name	BWW	Distance [NM]	Sail	ETA	ETA
1	Initial waypoint					
2		119.3	3.76	RL		1.00
3		078.3	5.31	RL		21.9 1.00
4		076.5	105.30	RL		21.9 1.00
5		119.1	2.20	RL		34.1 0.70
6		110.4	2.48	RL		34.1 0.70
7		068.5	3.27	RL		34.1 0.70
8		038.7	0.95	RL	15.7	0.10

ETA Calculator:

- 1 Click 'View'.
- 2 Click 'Schedule'.
- 3 Right click on the last waypoint.
- 4 Select 'Edit Waypoint...'

- 5 Select 'Set' in the ETA dropdown menu.

- 6 Set the desired ETA/Offset/Tolerance.

- 7 Click 'OK'. The desired ETA for each waypoint will now show in the desired ETA.

Setting Planned Speed:

- 8 Click 'Options'.

- 9 Select 'Set Planned Speed Mode...'

- 10 Set the planned speed for the entire voyage.

4.4 Selecting Active Route

The screenshot shows the ECDIS interface with the following components:

- Top Panel:** ECDIS Internal Clock 8 NOV 2018 12:00:00 UTC. ENC Category: All. Depth: (m). Status: Better scale available. Views: [Icons]
- Left Panel (Display):**
 - Orient: North Up
 - Range: 6 NM
 - REF: None
 - Heading & Speed: HDG 000.0°, STW 00.0 kn, COG 000.0°, SOG 00.0 kn, Set 000.0°
 - Position WGS84: LAT 00°00.000'N, LON 000°00.000'E
 - Vector & Trails: REF Ground, Vector Off, Plot Off, Predict Off
 - Alerts: No Unacknowledged Alerts
- Right Panel (Main Display):** A large empty area for the chart display.
- Bottom Panel (Route Explorer):**
 - Buttons: New, Open, Close, Activate (2)
 - Catalog: SAM TRAINING, TRAINING (1)
 - Route List Table:
- Bottom Right Panel (Route List):**

No	Name	BWW	Distance [NM]	Sail	P Corr [NM]	SB Corr [NM]	ROT [°/min]	Radius [NM]	Latitude	Longitude
1	Initial waypoint				0.500	0.500		1.00	60°44.020'N	017°21.988'E
2		119.3	3.76	RL	0.500	0.500	23.9	1.00	60°41.999'N	017°29.331'E
3		078.3	5.31	RL	0.500	0.500	23.9	1.00	60°43.003'N	017°39.260'E
4		076.5	105.30	RL	0.016	0.016	23.9	1.00	61°07.561'N	021°09.287'E
5		119.1	2.20	RL	0.016	0.016	34.1	0.70	61°06.638'N	021°13.209'E
6		110.4	2.48	RL	0.016	0.016	34.1	0.70	61°05.700'N	021°18.407'E
7		068.5	1.27	RL	0.016	0.016	34.1	0.70	61°06.872'N	021°24.561'E
8		038.7	0.95	RL	0.016	0.016		0.10	61°07.474'N	021°25.558'E
- Bottom Status Bar:** Planning View, 8 Waypoints (123.27 NM, 4.55), 1 Selected (105.65 NM, 4.13)

1 From the route explorer, select the route you would like to activate.

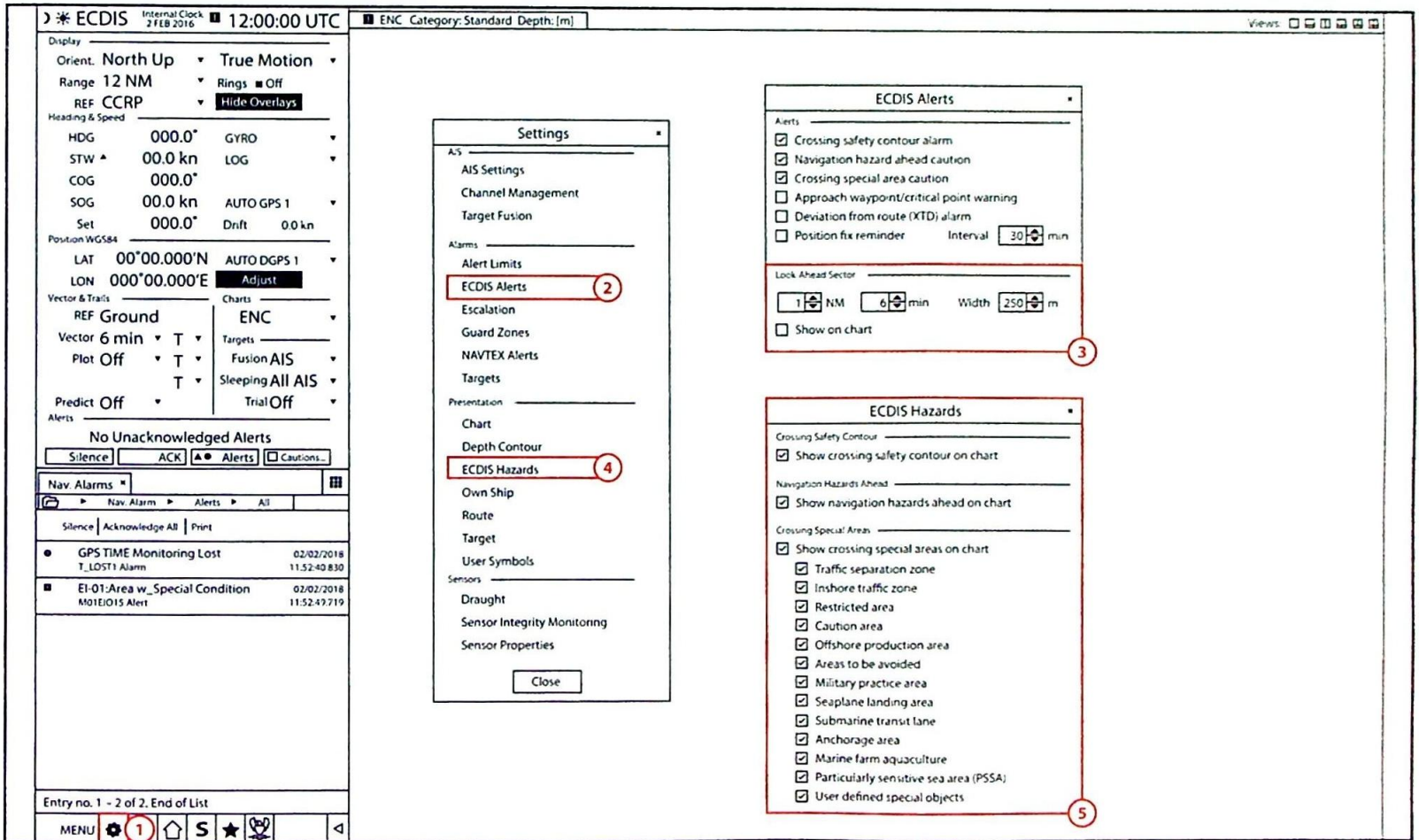
2 Click 'Activate'.

3 To activate a route from the waypoint list, click 'Route'.

4 Select 'Activate'.

Section 5: Route Monitoring

5.1 Look-Ahead



1 Click settings.

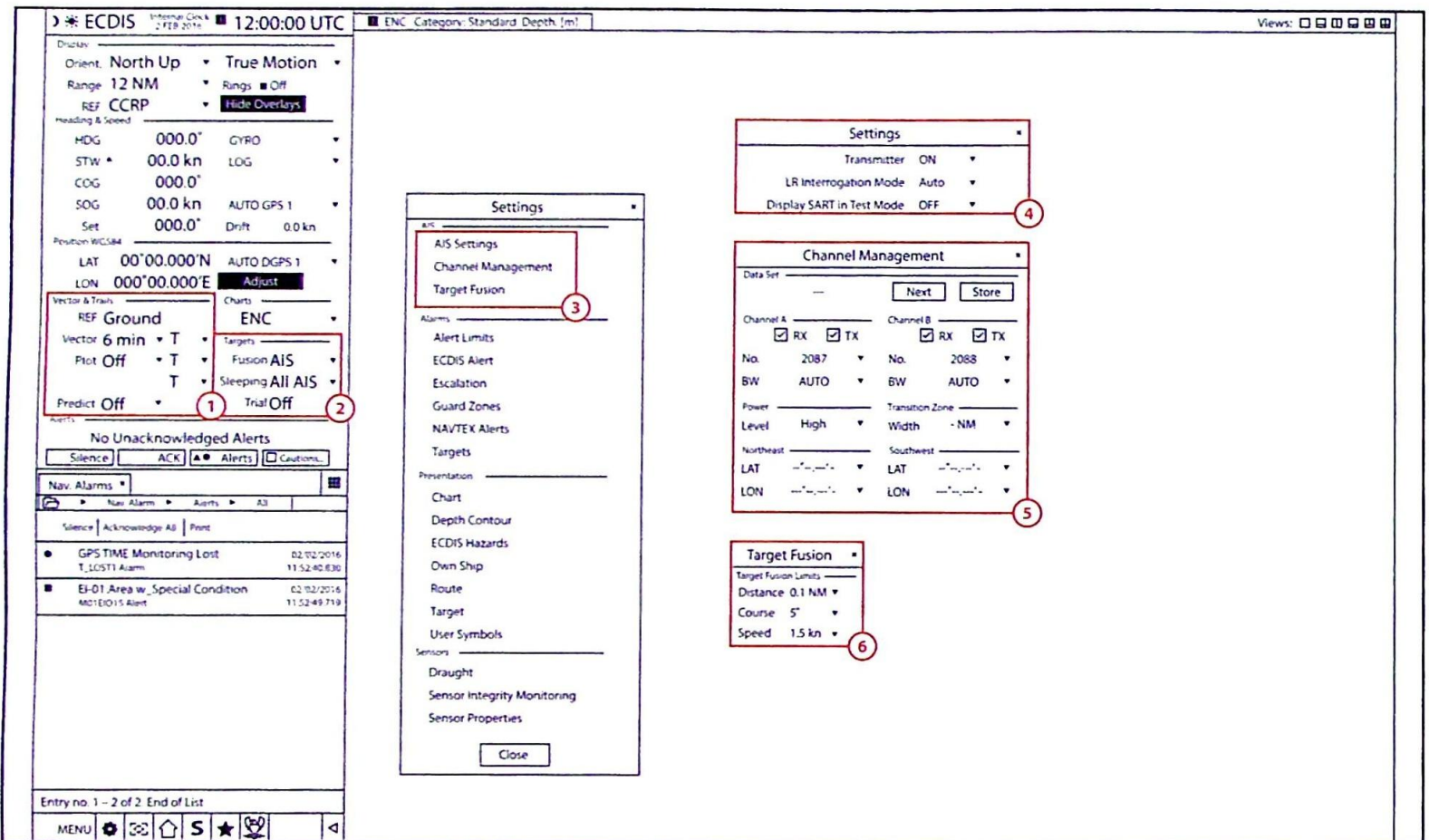
2 Click 'ECDIS Alerts'.

3 Set up 'Look-Ahead Sector'.

4 Select 'ECDIS Hazards'.

5 Enable/disable the hazards you would like to be highlighted on the chart.

5.2 TT/AIS/Vectors

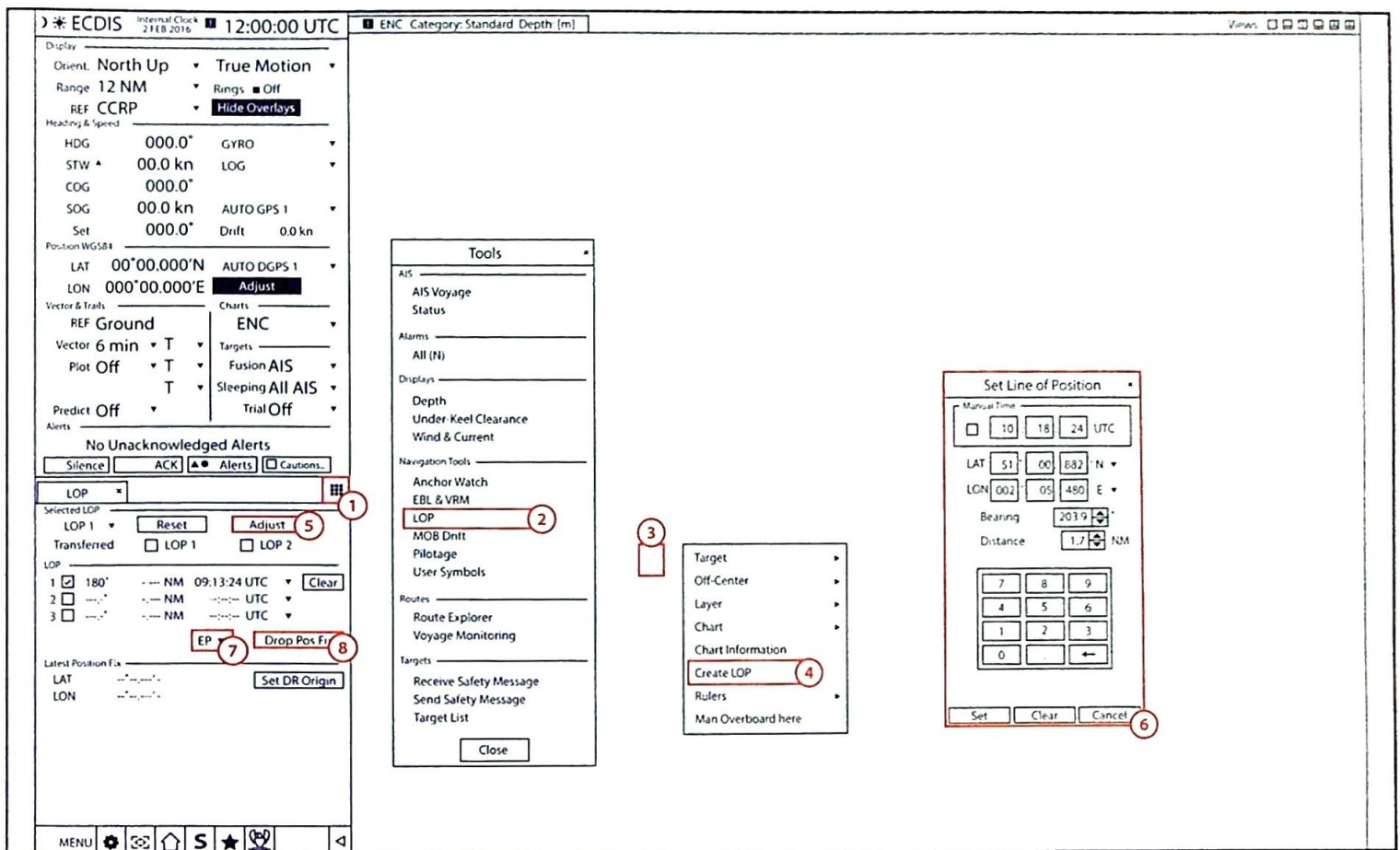


- 1 Vector length can be changed in this area.
- 2 Quick access AIS settings can be changed here.

- 3 Optional AIS menus:
 - a AIS Settings
 - b Channel Management
 - c Target Fusion

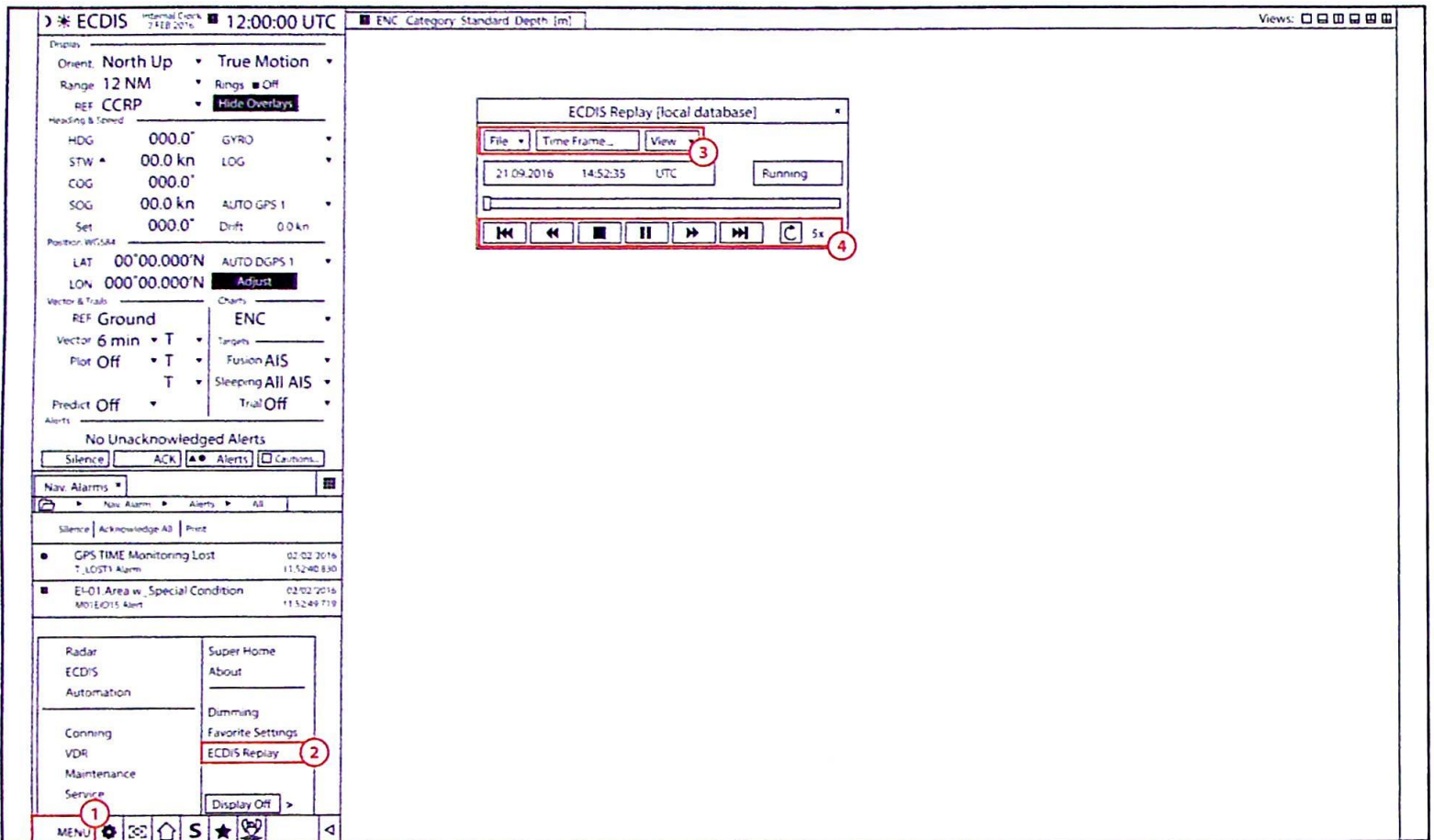
- 4 Example of AIS Settings menu.
- 5 Example of Channel Management menu.
- 6 Example of Target Fusion menu.

5.3 Position Fixing



- 1 Click 'Tools'.
- 2 Click 'LOP'.
- 3 Right click on the object.
- 4 Select 'Create LOP'.
- 5 Click 'Adjust'.
- 6 Enter the desired bearing/distance.
 - a Repeat steps 3 to 6 two more times to get three LOPs.
- 7 Select the source - EP/R/V.
- 8 Click 'Drop Pos Fix' to create a position fix.

5.4 Logs/Playback



1 Click 'MENU'.

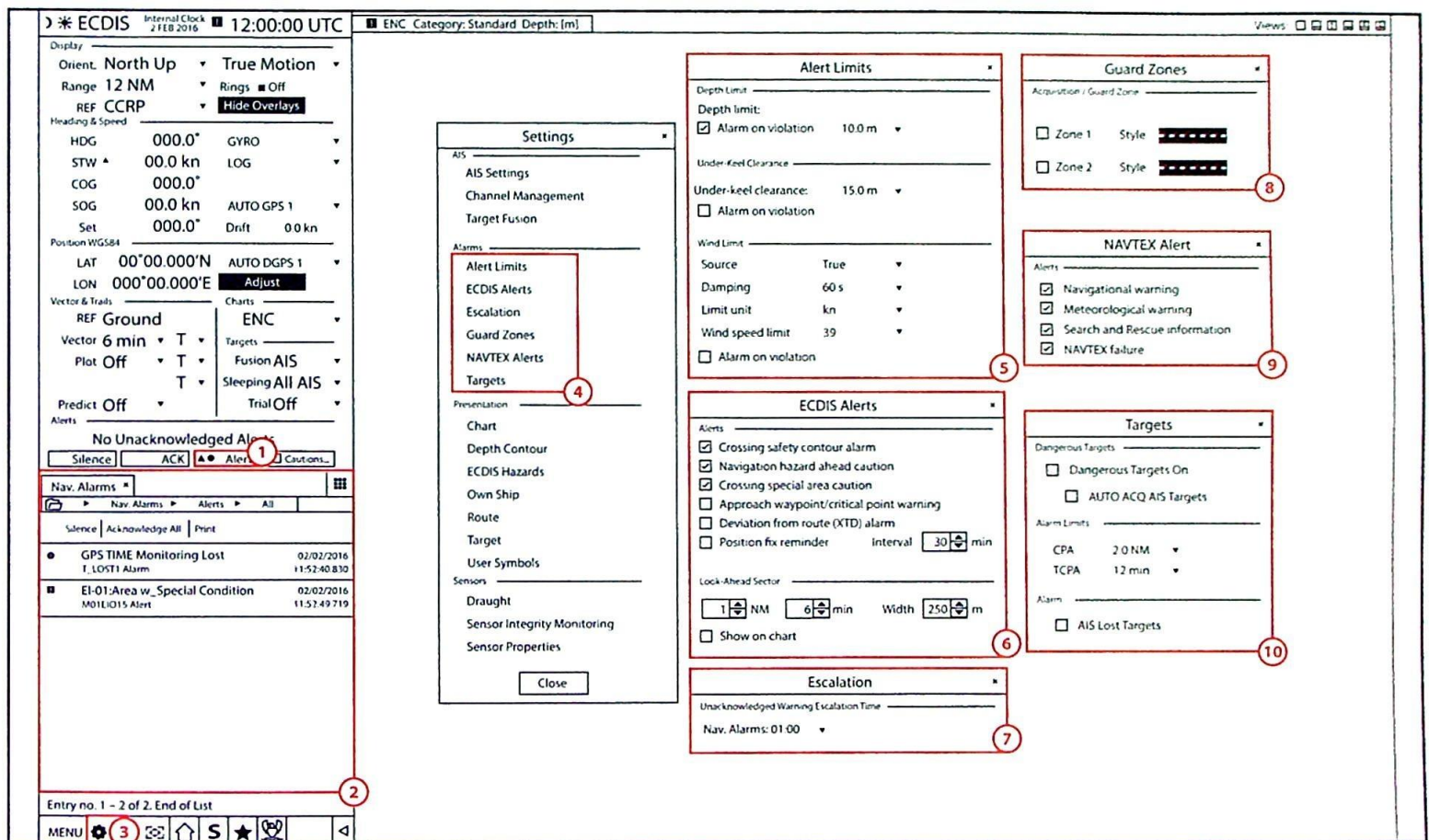
2 Click 'ECDIS Replay'.

3 Select replay file.

4 Use time bar tools to control replay.

Section 6: System Settings

6.1 Warning/Alarm Configuration

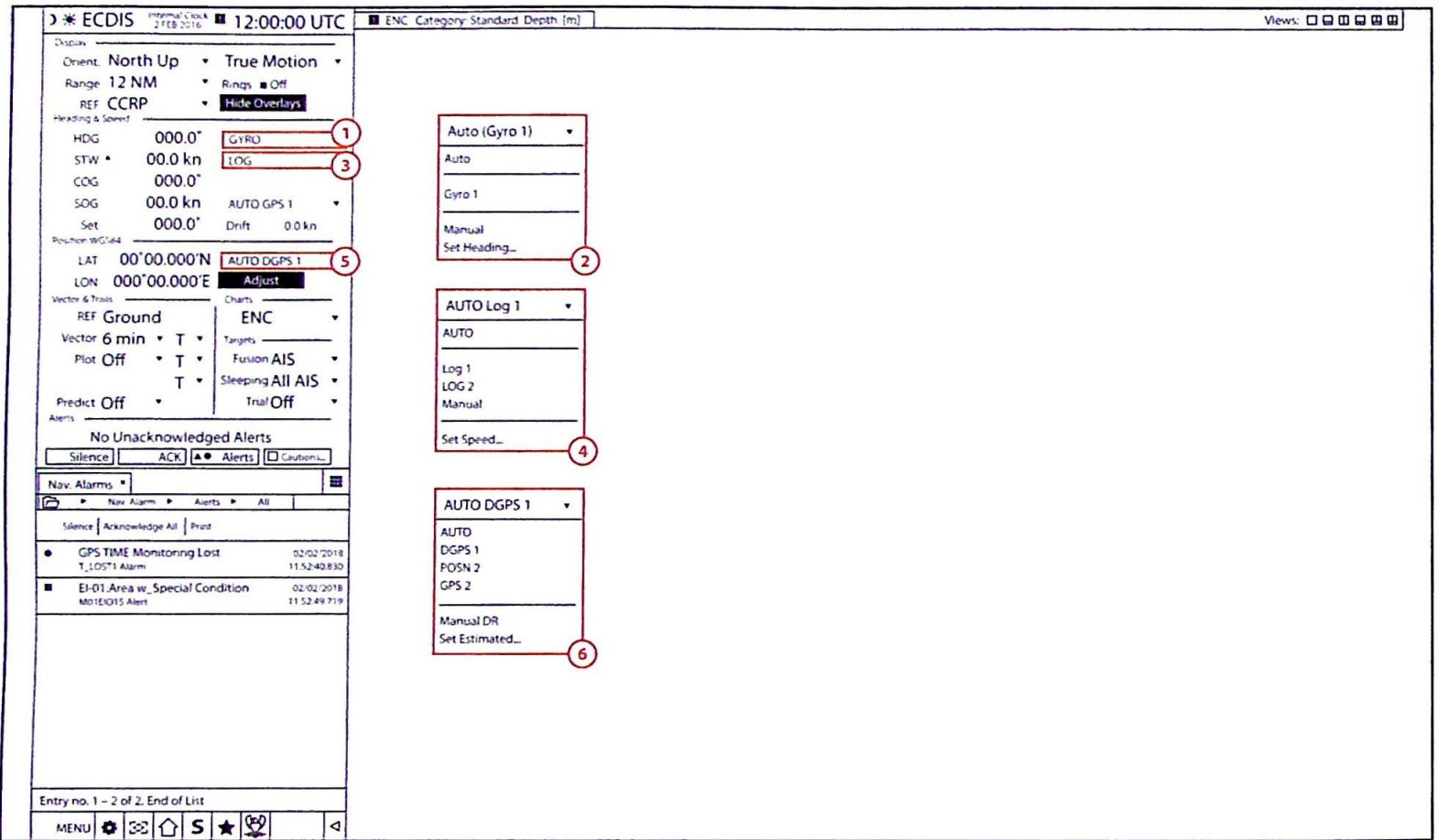


- 1 Click 'Alerts'.
- 2 Alerts list will be shown.
- 3 Click settings.
- 4 Choose from the following alert settings:
 - a Alert Limits
 - b ECDIS Alerts

- c Escalation
- d Guard Zones
- e NAVTEX Alerts
- f Targets
- 5 Alert Limits menu.
- 6 ECDIS Alerts menu.

- 7 Escalation menu.
- 8 Guard Zones menu.
- 9 NAVTEX Alerts menu.
- 10 Targets menu.

6.2 Position/Heading/Speed



1 Click 'GYRO'.

3 Click 'LOG'.

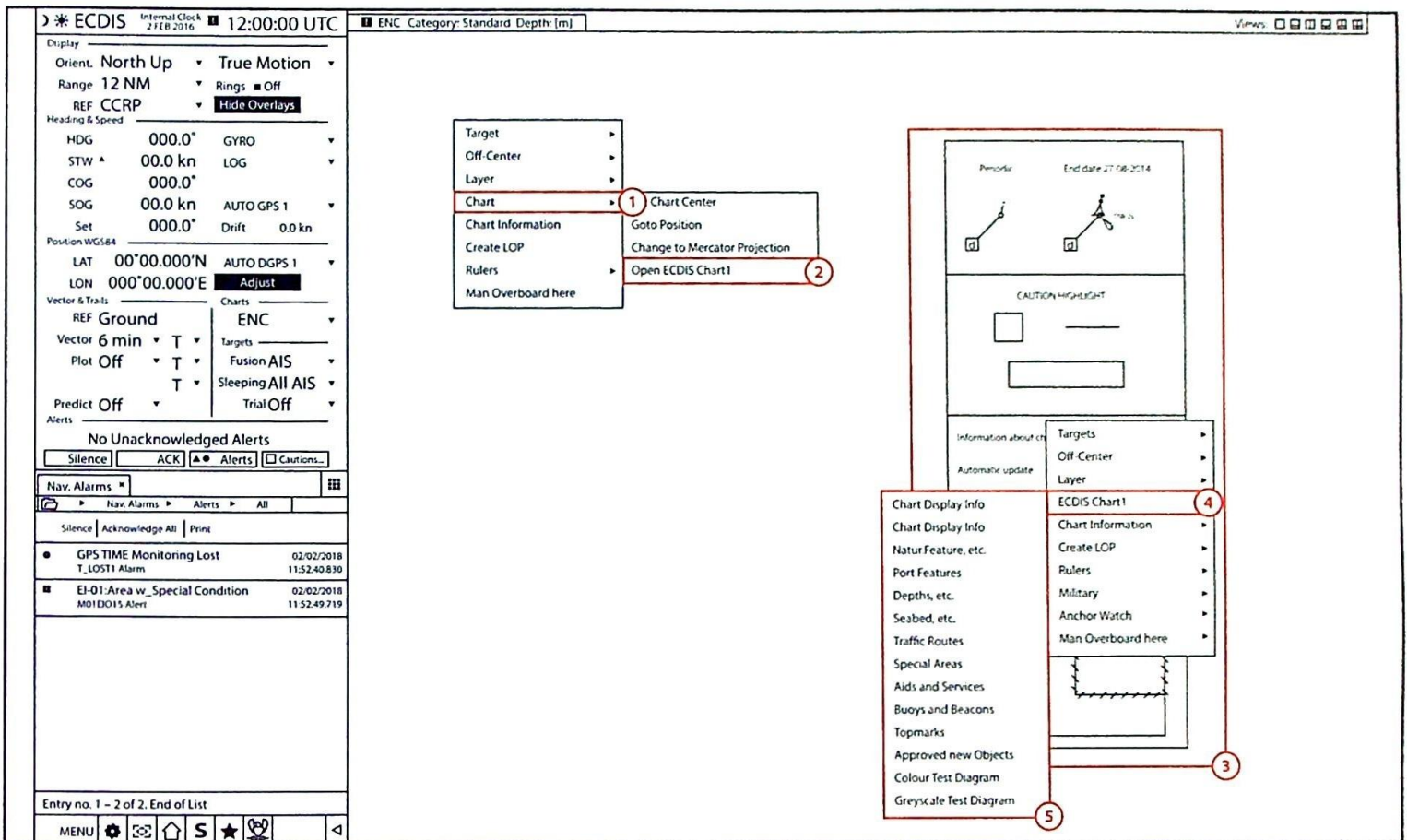
5 Click 'AUTO DGPS 1'.

2 Select input from the list available.

4 Select input from the list available.

6 Select input from the list available.

6.3 Emergency Menus



1 Right click anywhere on the chart and press 'Chart'.

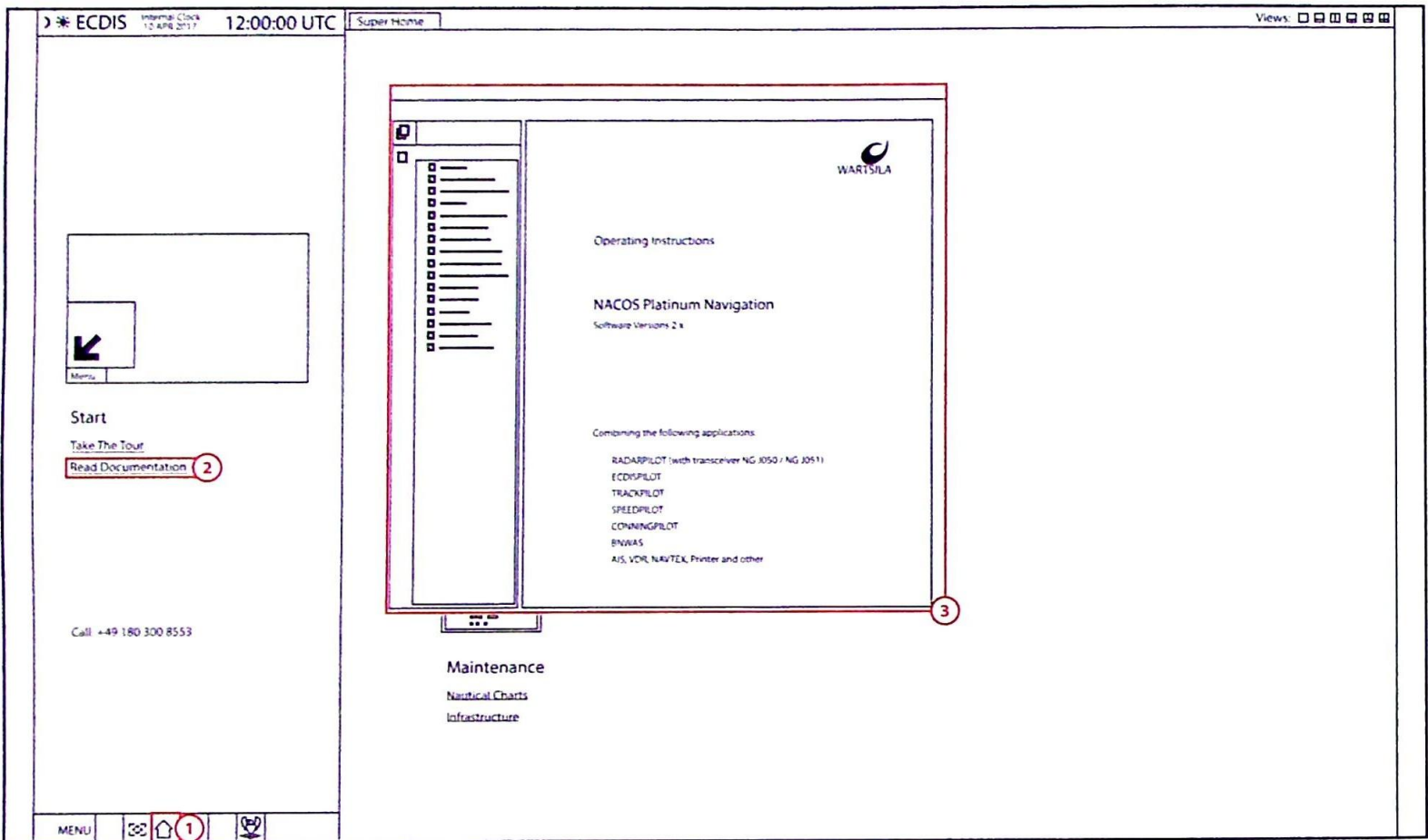
2 Click 'Open ECDIS Chart1'.

3 ECDIS Chart1 will open.

4 The context menu within Chart 1 is slightly different, allowing you to select 'ECDIS Chart1'.

5 Select a symbol topic from the list available.

6.4 Manual/About



1 Click 'Super Home'.

2 Click 'Read Documentation'.

3 A PDF of the manual will open.

21. Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/Premium/Premium+) – Familiarisation Checklist (Page 1 of 3)

1.	Company ECDIS Procedures	Review company documentation for ECDIS procedures and complete the below ECDIS Type Specific Familiarisation checklist.	
2.	Chart Display	Become familiar with the basic chart functionality from the main display.	
Main Chart Area			
	Chart Area Toolbars		Panels
	Control Panel		
3.	Navigational Tools	Operate all basic navigational functions and vessel setting options contained within the ECDIS for use of navigation.	
Display Panel Windows			
	AIS Messages		Sun/Moon
	Environment Data		System Information
	Tides (ON/OFF)		TRIAL/TGT Simulator
	Manually Fix Position		Targets
	Navigator		EBL/VRM/CHL
	Parallel Index Lines	Overlays	
	Precision Instrument		AIO Charts
	RADAR Settings		TODO Charts
	Route Data		Clearing Bearings
	Sensor Data/Status		MSI
	Special Purpose Objects		MARPOL Areas
4.	Chart Display Settings	Operate all chart display settings, become familiar with object layers, ENC symbology and define the vessel's safe water settings. Identify where all chart updates are managed in the system.	
Charts		Safety Alerts	
	Complete List		Safety Parameters
	By Position		Safety contour
	General	Transas Integrator	
	Layers		Charts
	ENC	Manual Corrections	
	Chart priority None/ENC/DNC/HCRF		Man Corr
	Spot soundings		
	Scale min (ON/OFF)		
	Accuracy (ON/OFF)		

Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/ Premium/Premium+) – Familiarisation Checklist (Page 2 of 3)

5. Route Planning

Operate all route planning functions and obtain all relevant schedule information for passage planning and route monitoring purposes.

Route Planning	Tasks
New	SAR
WPT Editor	Tides
Ref Points	Ports
Route Monitoring	
Show	Ship
Monitoring	Route
Load	Waypoints
Save	Headline (ON/OFF)
Edit Options	XTD (ON/OFF)
Maps	
Schedule Calculation	Load/Create New Map
Check Route	Add Objects
Voyage plan	Edit Objects
Protection Control	Monitoring
Anchor	Maps
Default Route Settings	Find Objects
	Display Options

6. Route Monitoring

Operate the variety of voyage data functions for route monitoring to display and obtain relevant information for navigation and the ship's safety.

Route Monitoring	Tasks
Ship	Vectors Window
Ship by Contour/Symbol	Environment Data
Route	Far Sounder
Set Schedule	Manually Fix Position
Waypoints	Parallel Index Lines
Past track settings	Radar Settings
Show primary track (ON/OFF)	Route Data
Alerts	Sun/Moon
Out of schedule (ON/OFF)	System Information
	TRIAL/TGT Simulator
Display Panel Window	Tasks
COG/SOG/HDG/STW Window	Targets

7. Chart Updating

The operator should know how to update electronic charts and be thoroughly aware of their responsibilities concerning updating. It is a legal requirement that charts are maintained in an up-to-date condition.

Chart Area Toolbars

Transas Integrator

8. System Sensors

Identify where the operator can select or deselect all sensors connected to the ECDIS and verify the vessel's particulars.

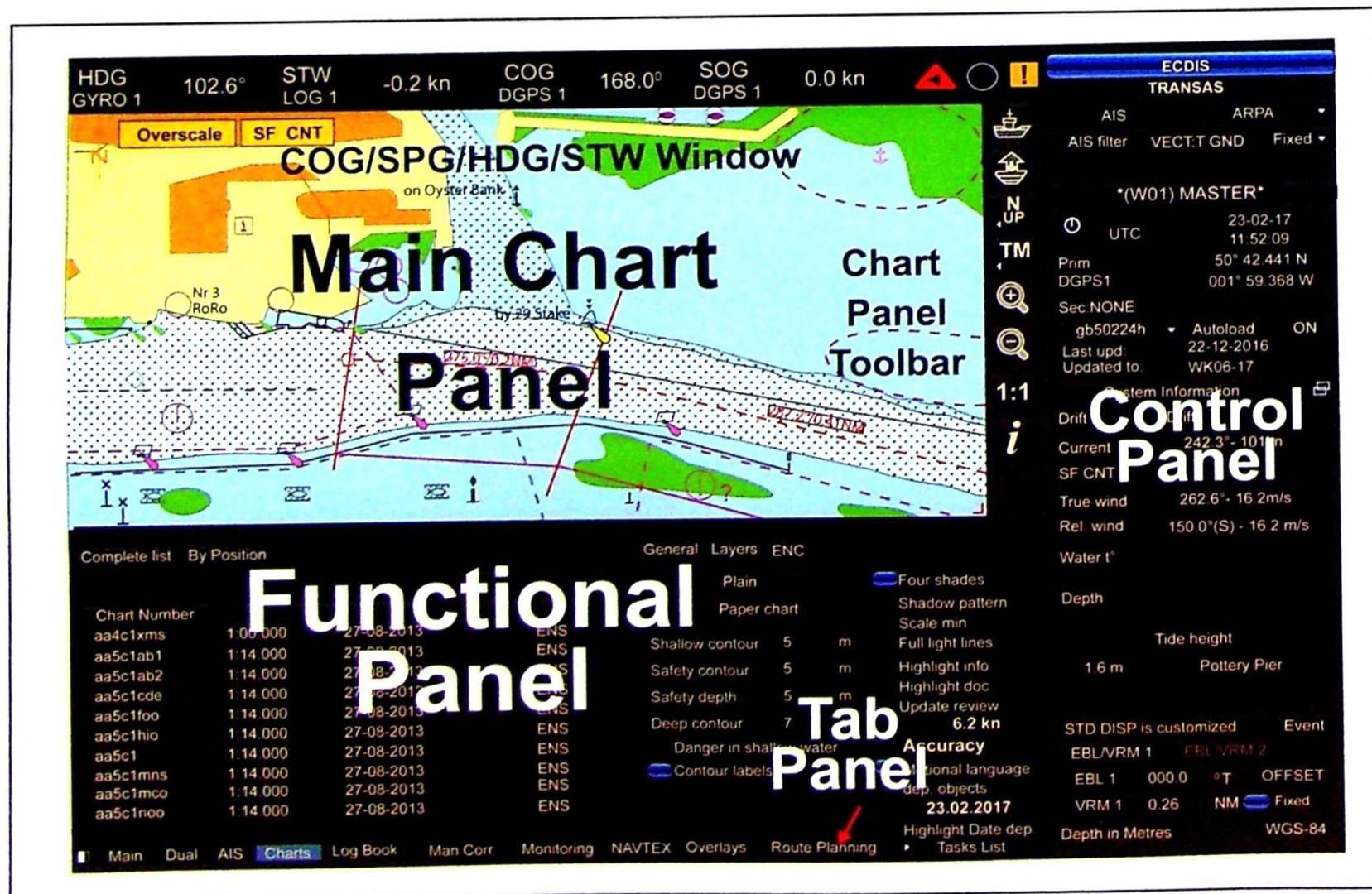
Sensors	
Ship Position	Speed
Show Pos mark (ON/OFF)	Echo Sounder
Heading	
Gyro Offset	

Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/Premium/Premium+) – Familiarisation Checklist (Page 3 of 3)

9.	System Alerts	Identify the ECDIS system's category of Alarms and Prompts generated by the operator and by the ECDIS system.	
	Safety Alerts		
	Safety Frame		Source of Safety Parameters
	Show safety frame (ON/OFF)		Area Alerts
	Antigrounding Alerts		Anchorage area (ON/OFF)
	Highlight Danger (ON/OFF)		Navigational Alerts
	Safety Parameters		Prim/Sec diverged (ON/OFF)
	Safety depth		
10.	System Units	Become familiar with the system's logbook, records, data storage and configuration set up.	
	Config		
	General		Units
	RADAR Settings		Ship Settings
	Time Zone		Logbook
	Licence Info		Archive System Log
	COM Trace		Logbook Settings
11.	ECDIS Operator's Manual	Locate the system's operator's user guide for referencing and help.	
	Config		
	Help		

Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/Premium/Premium+)

Key Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/Premium/Premium+) New ECDIS Menu Functions		
1.	Configuration of Ship's Length, Beam, Maximum Speed and ROT	System Configuration Utility>INS>Ship Settings/Speed Maneuvering
2.	View list of installed Charts	Tasks List>Charts>Complete List
3.	View the latest update number installed	Use Info function to interrogate chart or Tasks List>Charts
4.	View information on charted objects and view additional text	Info Button>Left Click
5.	Set the Safety Depth and Safety Contour	Tasks List>Monitoring>Safety Alerts>Safety Parameters
6.	Set the Shallow and Deep Contour	Tasks List>Monitoring>Safety Alerts>Safety Parameters
7.	Input a User Map Object	Tasks List>Maps
8.	Input a Manual Update	Tasks List>Man Corr
9.	Turn the ship outline on	Tasks List>Monitoring>Route Monitoring>Ship by Contour
10.	Configure the Safety Frame	Tasks List>Monitoring>Safety Alerts>Safety Frame
11.	Configure Velocity Vectors and Ship's Track	Tasks List>Monitoring>Route Monitoring>Ship/Past Track Control Panel>Vectors Window
12.	Configure Area Alarms	Tasks List>Monitoring>Safety Alerts>Area Alerts
13.	Manually change WPT information of an Active Route	Tasks List>Monitoring>Waypoints>Next Waypoint – Manual
14.	View past Alarms and Warnings	Alerts Windows and Tasks List>Log Book
15.	Input a Visual or Radar Fix	Display Panel>Manually Fix Position



The screenshot displays the ECDIS Transas interface with the following elements:

- Applications Window:** ECDIS
- Position Dropped Window:** TRANSAS
- Sensor Window:** AIS, ARPA
- Vectors Window:** AIS filter: VECT T GND, Fixed
- Indications Window:** NO indications
- Network Window:** *(W01) MASTER*
- Time Window:** UTC, 23-02-17, 11:52:09
- Primary Position Window:** Prim DGPS1, 50° 42.441 N, 001° 59.368 W
- Secondary Position Window:** Sec: NONE
- Charts Area Window:** gb60224h, Autoload ON, Last upd: 22-12-2018, Updated to: WK06-17
- System Information:** Drift 282.6° -0.2 kn, Current 242.3° - 1.2 kn, SF CNT 5.0 m, True wind 252.6° - 16.2 m/s, Rel. wind 150.0° (S) - 16.2 m/s, Water t°, Depth, Tide height 1.6 m Pottery Pier
- Operational Window:** STD DISP is customised, Event
- EBL/VRM/CHL Window:** EBL/VRM 1, EBL/VRM 2, EBL 1 000.0 0T OFFSET, VRM 1 0.25 NM Fixed
- Information Window:** Depth in Metres, WGS-84

- Applications Window
- Position Dropped Window
- Sensor Window
- Vectors Window
- Indications Window
- Network Window
- Time Window
- Primary Position Window
- Secondary Position Window
- Charts Area Window
- Display Panel Window
- Operational Window
- EBL/VRM/CHL Window
- Information Window

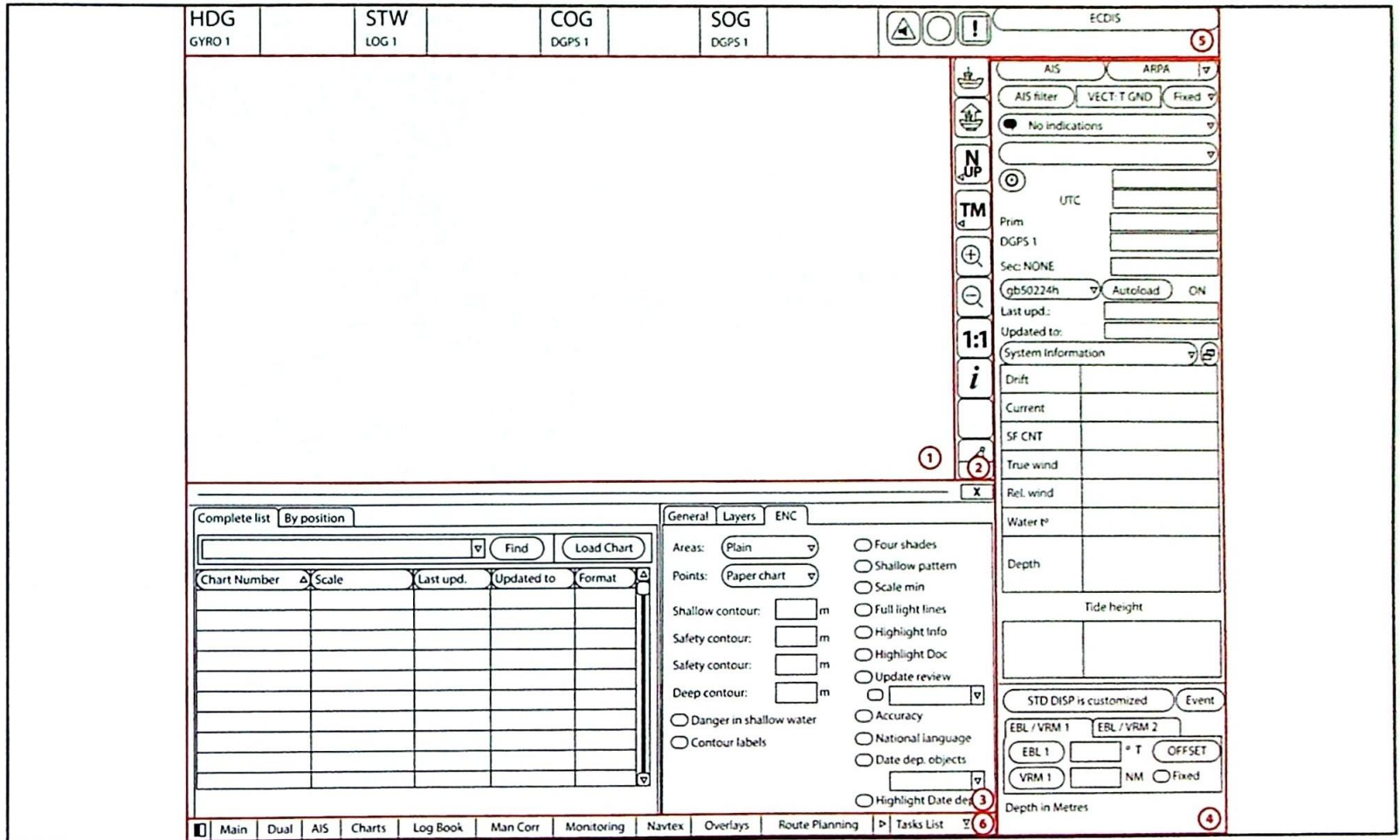
Wärtsilä (Transas) Navi-Sailor 4000 ECDIS MFD (Standard/Standard+/Premium/Premium+)

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Section 1: Main Display

1.1 Screen Layout



1 Main chart panel

3 Function panel

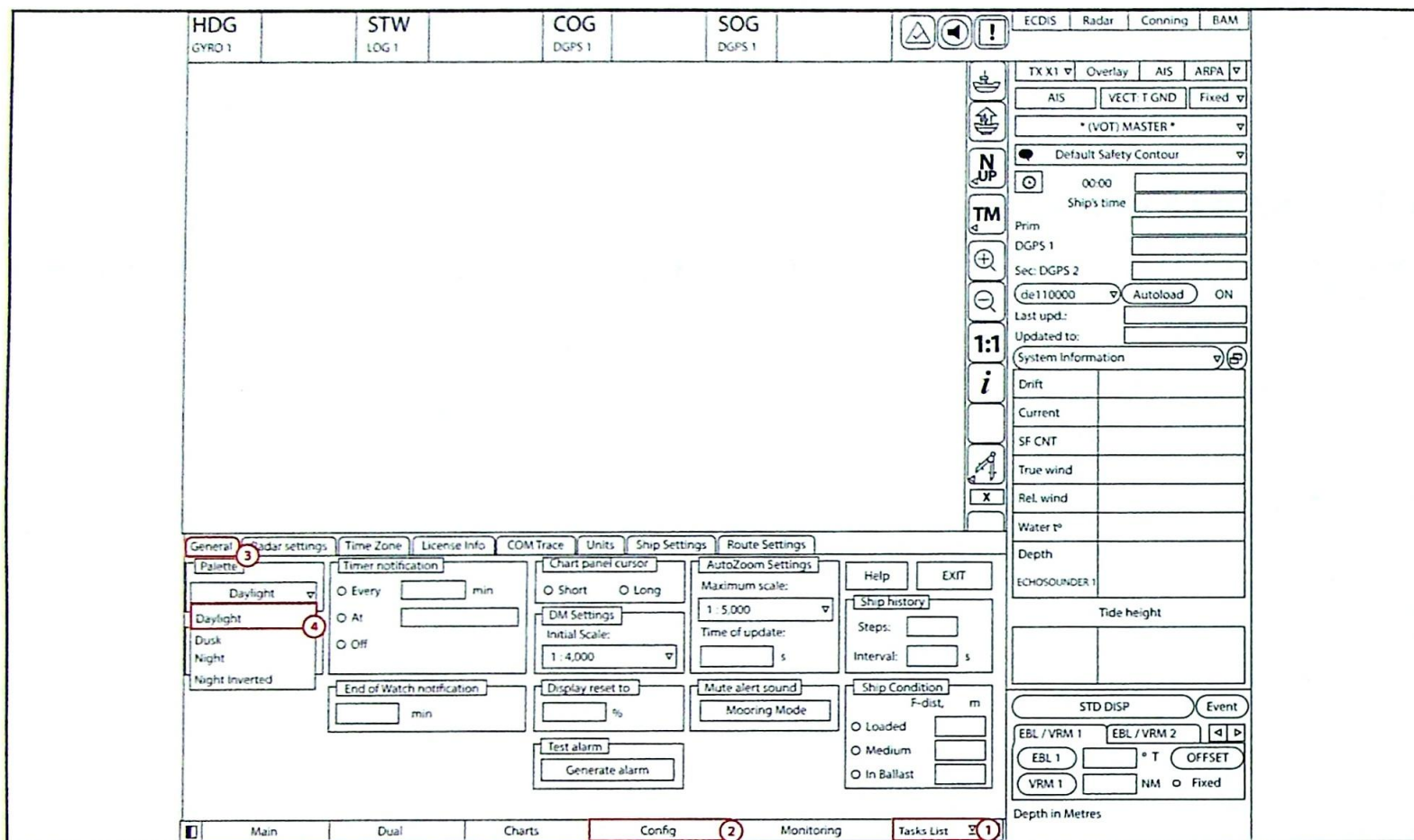
5 Sensor panel

2 Chart panel toolbar

4 Control panel

6 Tab panel

1.2 Colour Palette



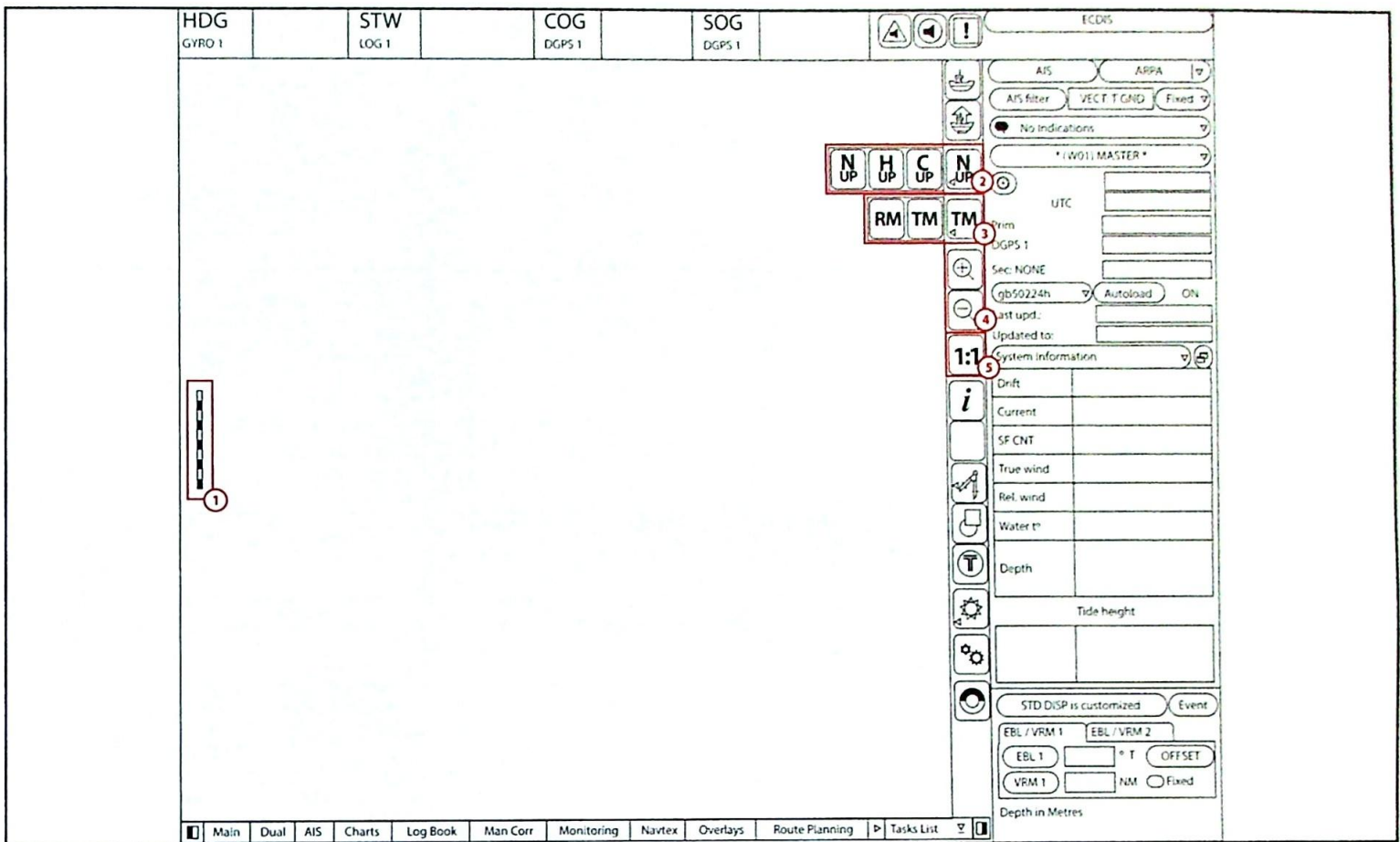
1 Ensure 'Config' is enabled in the 'Tasks List'.

3 Ensure the 'General' tab is selected.

2 Ensure the 'Config' tab is selected.

4 Choose your colour palette from the dropdown menu.

1.3 Range/Scale/Motion



1 Scale bar to view.

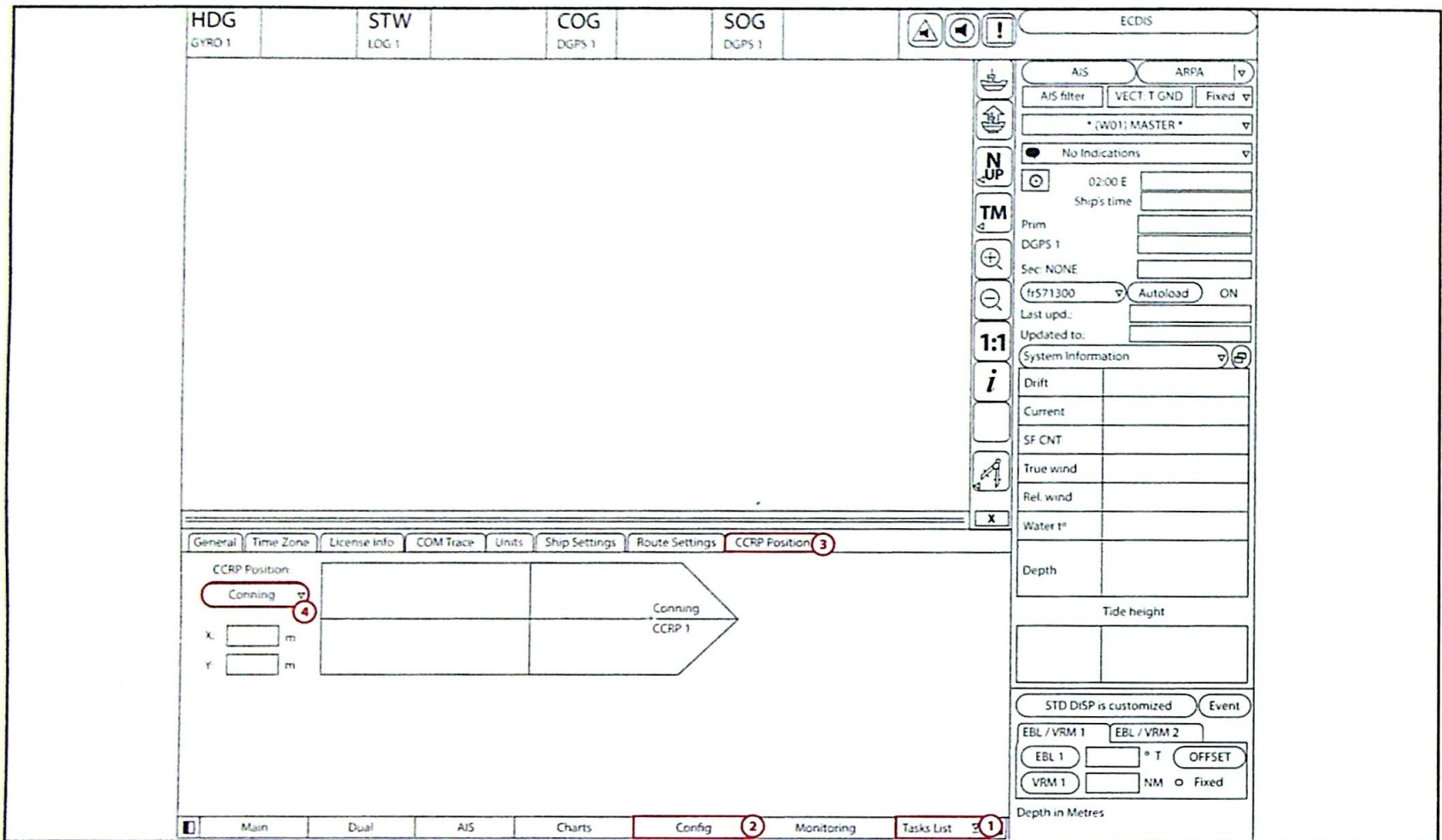
2 Select 'North Up', 'Heads Up' or 'Course Up'.

3 Select 'Relative Motion' or 'True Motion'.

4 Use '+' and '-' to manually zoom in and zoom out.

5 Click '1:1' to select the compilation scale for the area bound by your main chart panel.

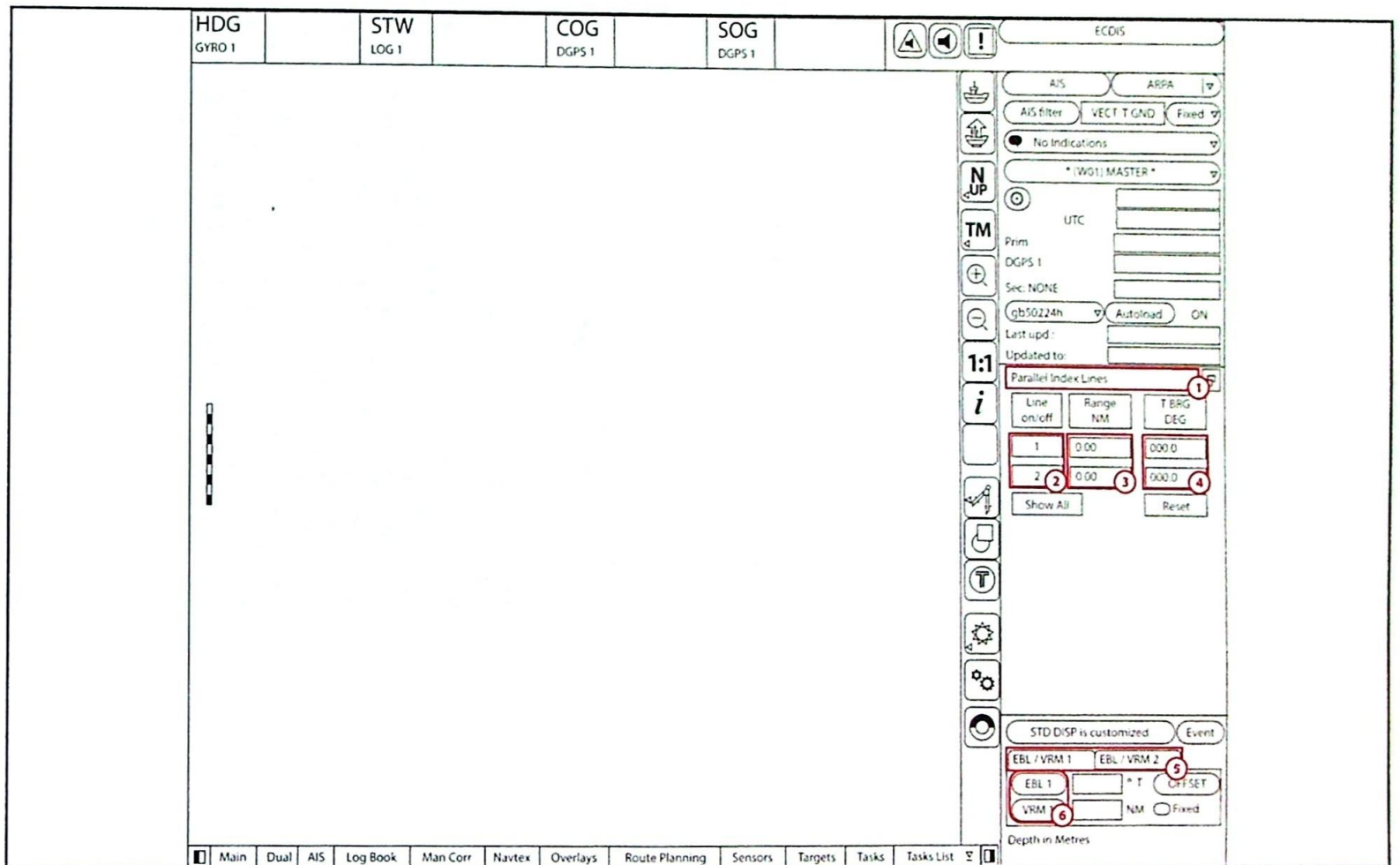
1.4 Setting CCRP



- 1 Ensure 'Config' has been enabled in the 'Tasks List'.
- 2 Ensure 'Config' is selected.
- 3 Click on 'CCRP Position'.
- 4 Left click to select CCRP position.

Section 2: Navigation Tools

2.1 EBL/VRM/PI



1 Ensure 'Parallel Index Lines' is selected from the Display Panel dropdown menu.

2 Click on '1' or '2' to enable/disable PI lines.

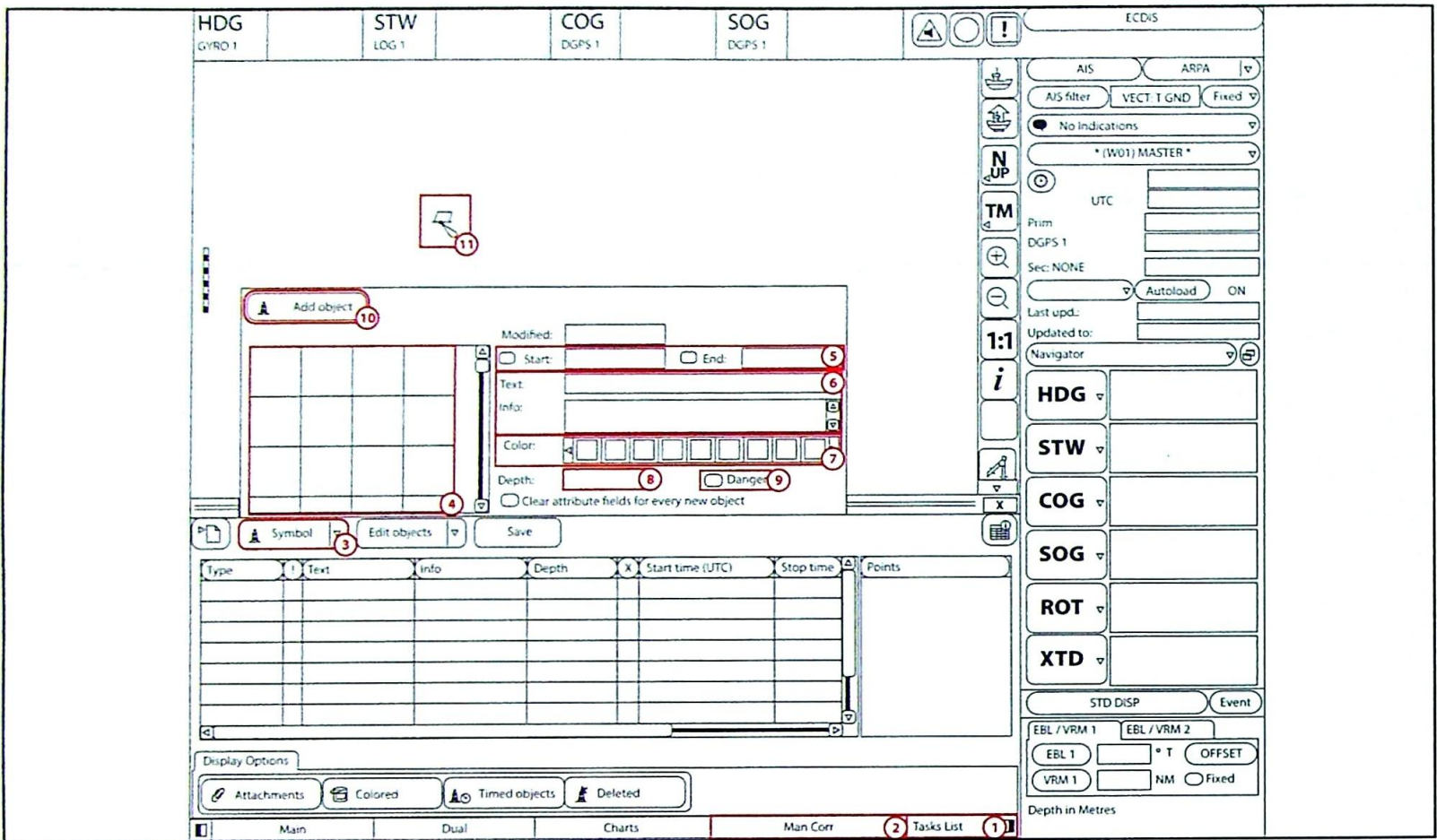
3 Insert the PI line range.

4 Insert the PI line bearing.

5 Select 'EBL/VRM 1' or 'EBL/VRM 2'.

6 Click 'EBL 1/VRM 1' to enable/disable.

2.2 Manual Corrections

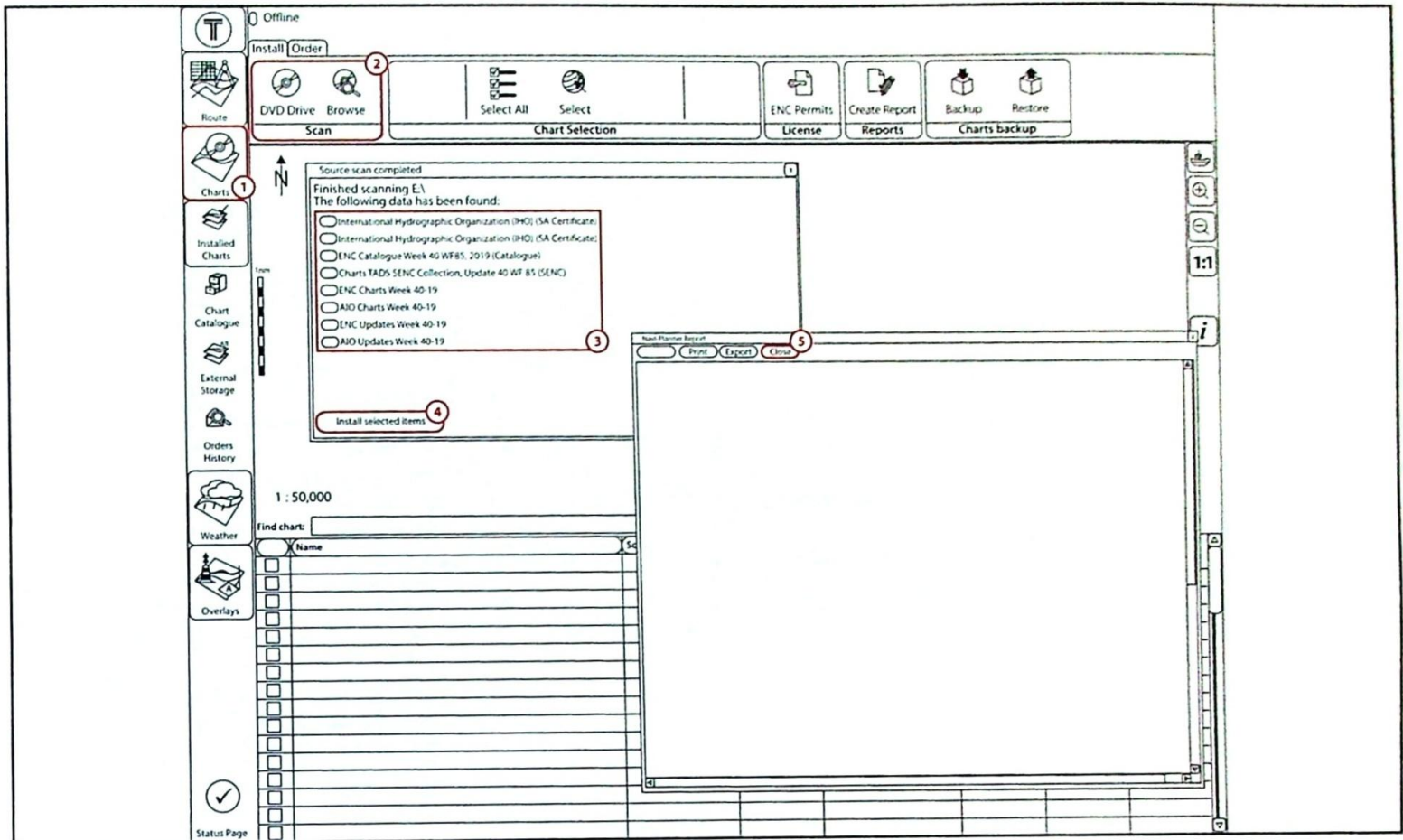


- 1 Ensure 'Manual Corrections' has been enabled in the 'Tasks List'.
- 2 Ensure 'Man Corr' is selected.
- 3 Click on 'Symbol'.
- 4 Choose an object from the list available.

- 5 Configure 'Start' and 'End' options.
- 6 Insert 'Text' and additional 'Info'.
- 7 Select a 'Colour', if available.
- 8 Set 'Depth' value.

- 9 Enable 'Danger', as required.
- 10 Click 'Add object'.
- 11 Left click anywhere on the chart to place the object.

2.3 Chart Updates



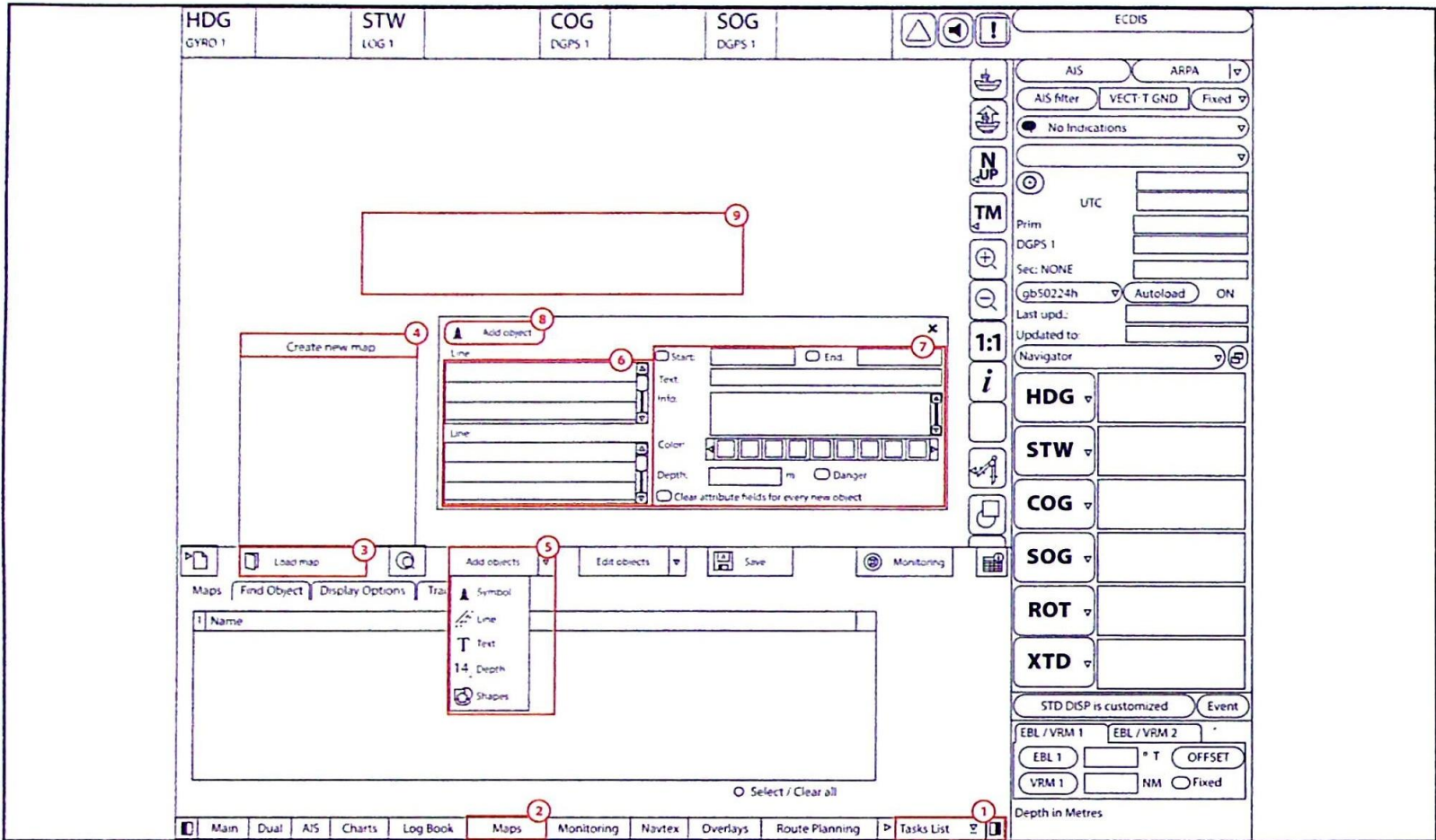
Note to user: To update charts, you are required to enter the 'Navi Planner' mode.

- 1 Click 'Charts'.
- 2 Select the 'DVD Drive' or 'Browse' containing your charts.

- 3 Select the data that is required to install.
- 4 Click to install selected items.

- 5 Click to close.

2.4 No Go Areas/User Charts



1 Ensure 'Maps' has been enabled in the 'Tasks List'.

2 Ensure 'Maps' is selected.

3 Click 'Load map'.

4 Click 'Create new map'.

5 Select an object from the dropdown menu.

6 Select an object from the list available.

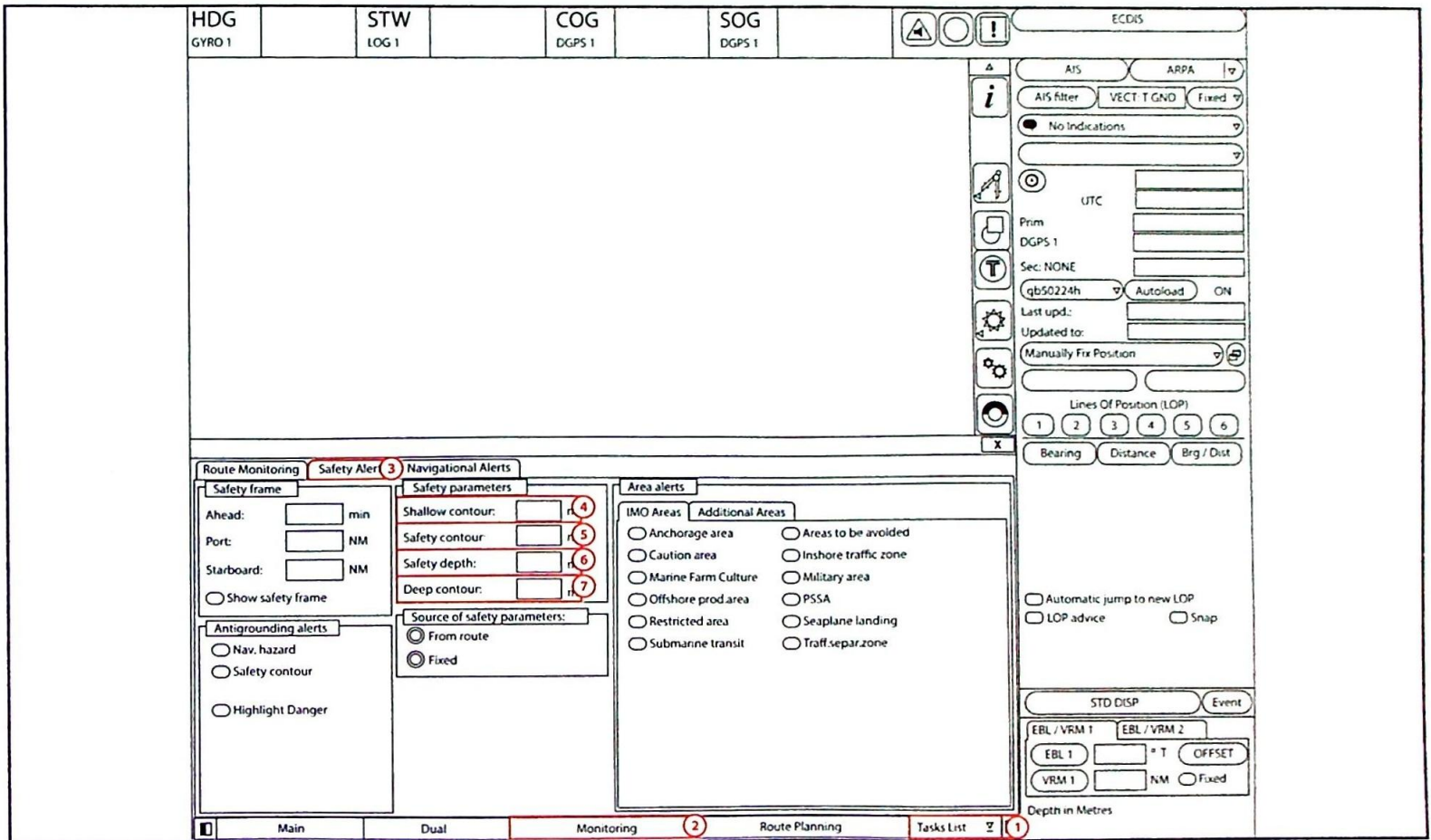
7 Insert object info, as required.

8 Click 'Add object'.

9 Left click anywhere on the chart to start placing the object.

Section 3: Chart Display Settings

3.1 Safety Depth/Contour



1 Ensure 'Monitoring' is enabled in the 'Tasks List'.

2 Ensure 'Monitoring' is selected.

3 Select 'Safety Alerts'.

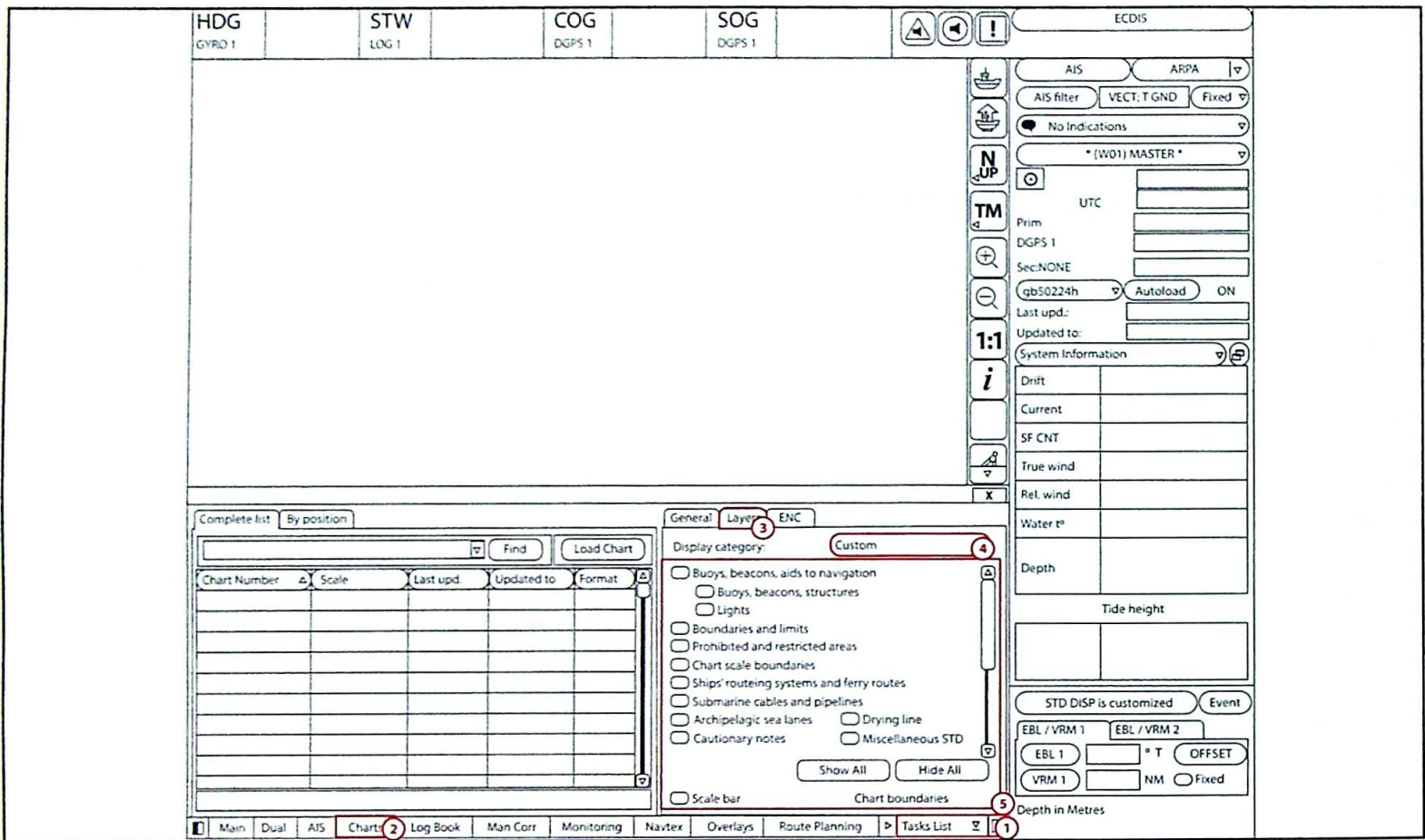
4 Set 'Shallow contour'.

5 Set 'Safety contour'.

6 Set 'Safety depth'.

7 Set 'Deep contour'.

3.2 Display Preference Options



1 Ensure 'Charts' is enabled in the 'Tasks List'.

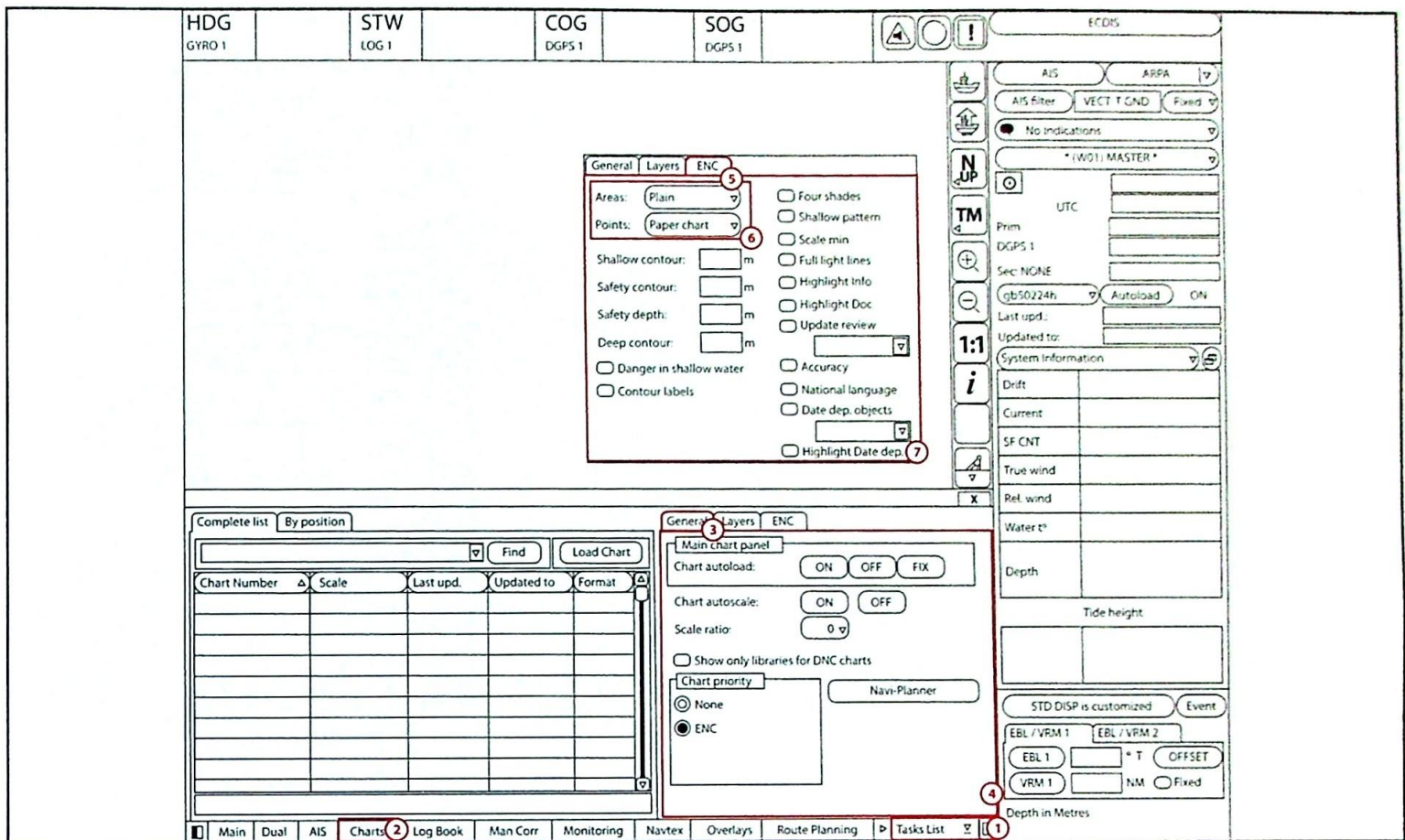
2 Ensure 'Charts' is selected.

3 Select 'Layers'.

4 Ensure 'Custom' is selected from the dropdown menu.

5 Turn 'Layers' ON/OFF, as required.

3.3 Display Configuration



1 Ensure 'Charts' is enabled in the 'Tasks List'.

2 Ensure 'Charts' is selected.

3 Select 'General'.

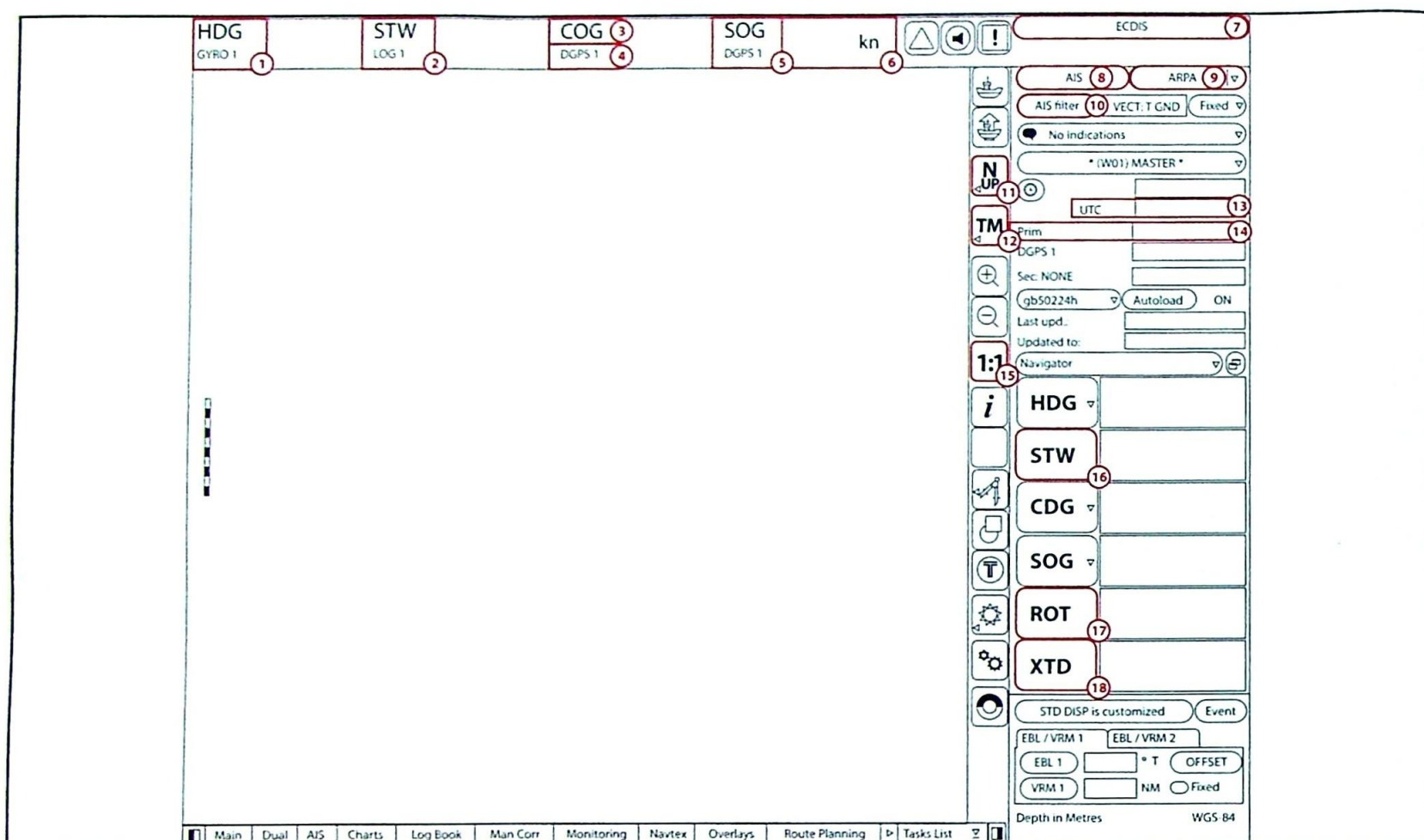
4 Edit 'Main chart panel' and 'Chart priority' settings, as required.

5 Select 'ENC'.

6 Choose between 'Plain' and 'Paper chart' symbology.

7 Edit ENC features, as required.

3.4 Abbreviations Part 1

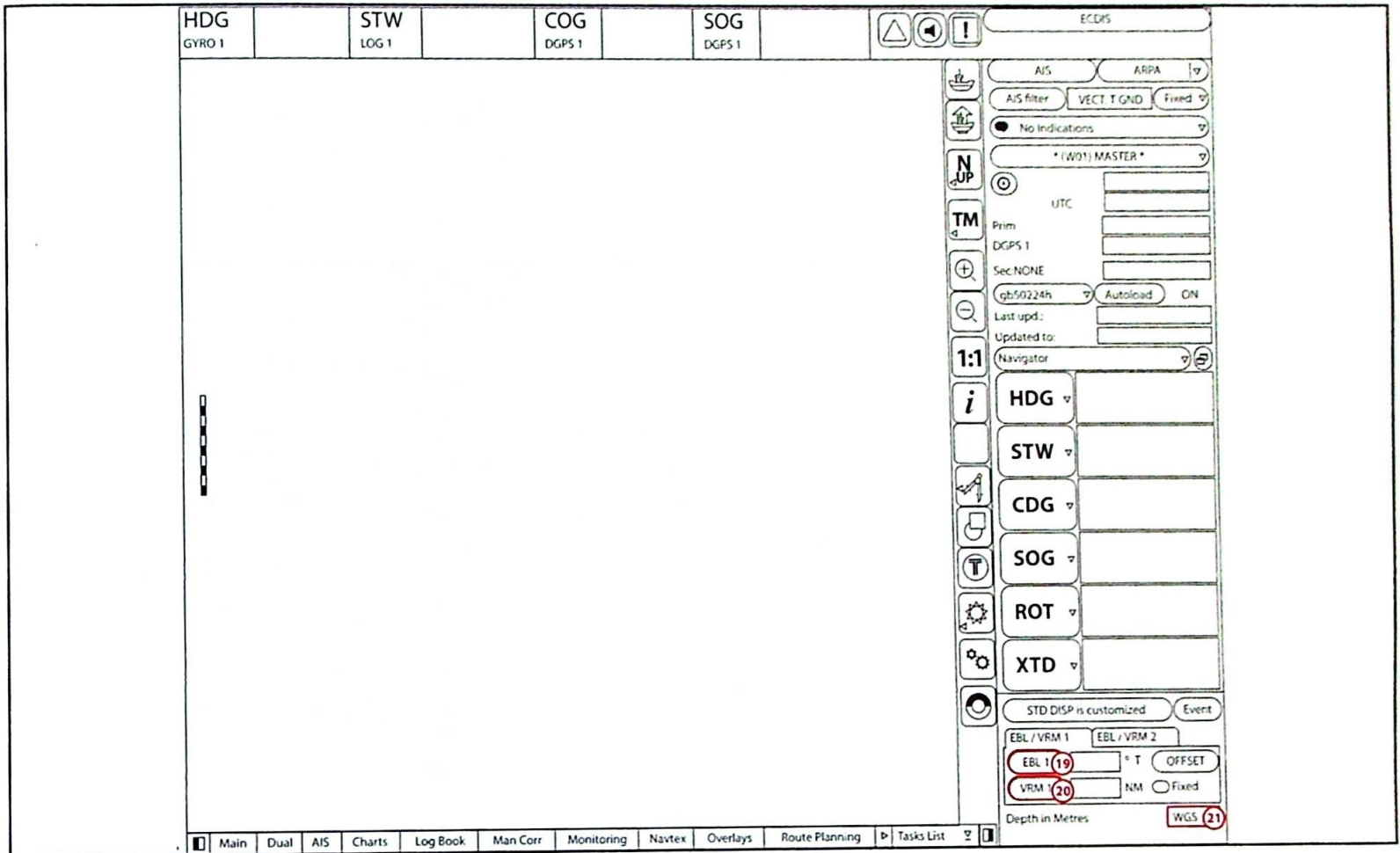


- 1 Heading
- 2 Speed Through Water
- 3 Course Over Ground
- 4 Differential Global Positioning System
- 5 Speed Over Ground
- 6 Knots

- 7 Electronic Chart Display and Information System
- 8 Automatic Information System
- 9 Automatic Radar Plotting Aid
- 10 Automatic Information System filter
- 11 North Up

- 12 True Motion
- 13 Universal Time Coordinated
- 14 Primary
- 15 Compilation Scale (1:1)
- 16 Speed Through Water
- 17 Rate of Turn
- 18 Cross Track Distance

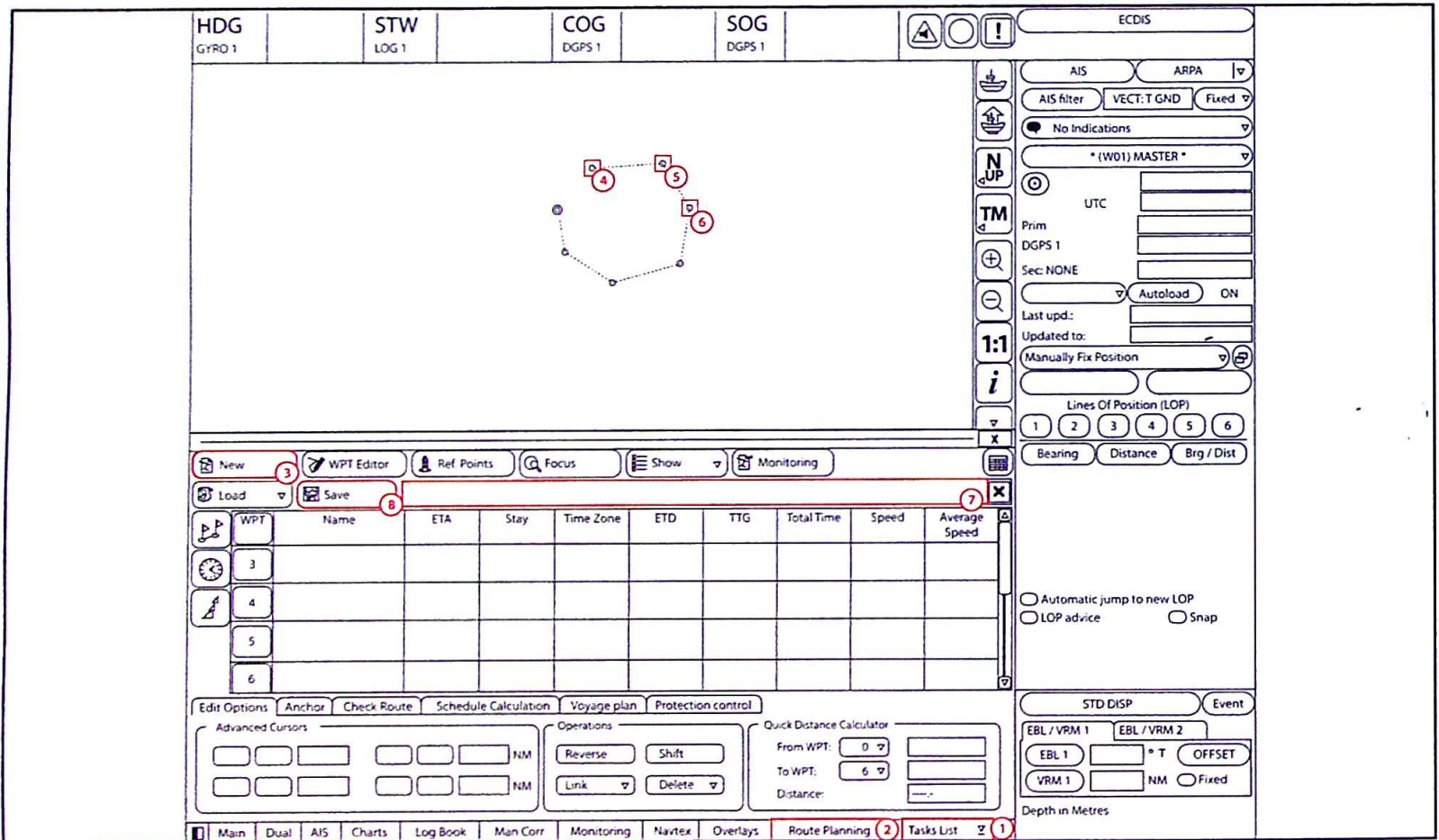
3.4 Abbreviations Part 2



- 19** Electronic Bearing Line
- 20** Variable Range Marker
- 21** World Geodetic System 1984

Section 4: Route Planning

4.1 Creation



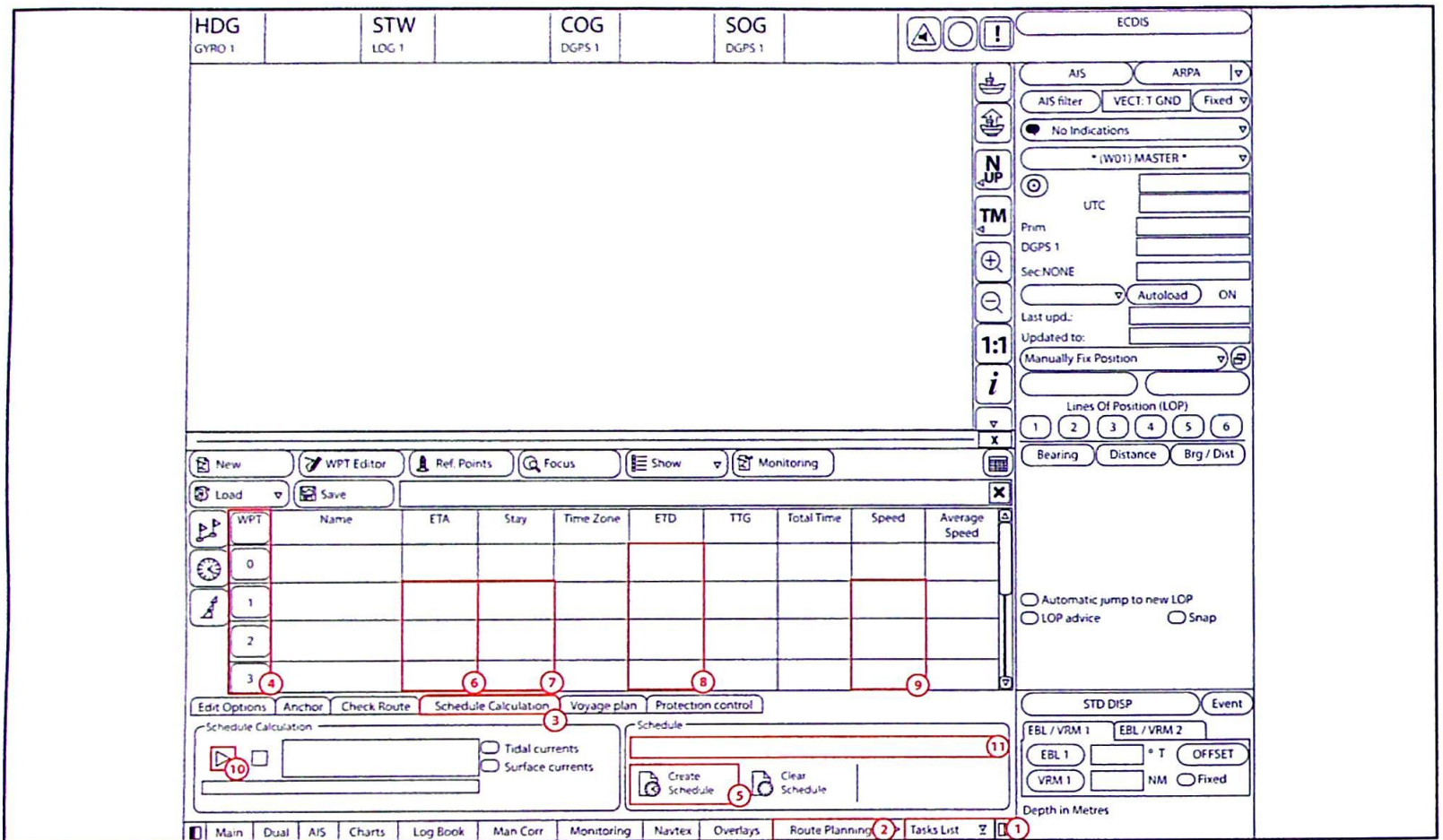
- 1 Ensure 'Route Planning' is enabled in the 'Tasks List'.
- 2 Ensure 'Route Planning' is selected.
- 3 Click 'New'.
- 4 Left click on the chart to place your first waypoint.
- 5 Left click again to place your next waypoint.
- 6 Consecutive left clicks will place more waypoints.
- 7 Give your route a name.
- 8 Click 'Save' to finish.

4.2 Route Checking

The screenshot shows the ECDIS interface with the 'Check Route' dialog box open. The dialog box has a 'Track control mode' section with a play button (6) and a stop button (10). A list of objects to check is shown, with a dropdown menu (5) listing various navigational hazards. The 'Tasks List' at the bottom shows 'Route Planning' (2) as the active task. The chart area shows a route with waypoints 0, 1, 2, and 3 (4). The 'Check Route' dialog box also has a left arrow (7) and a right arrow (8) for cycling through warnings/alarms.

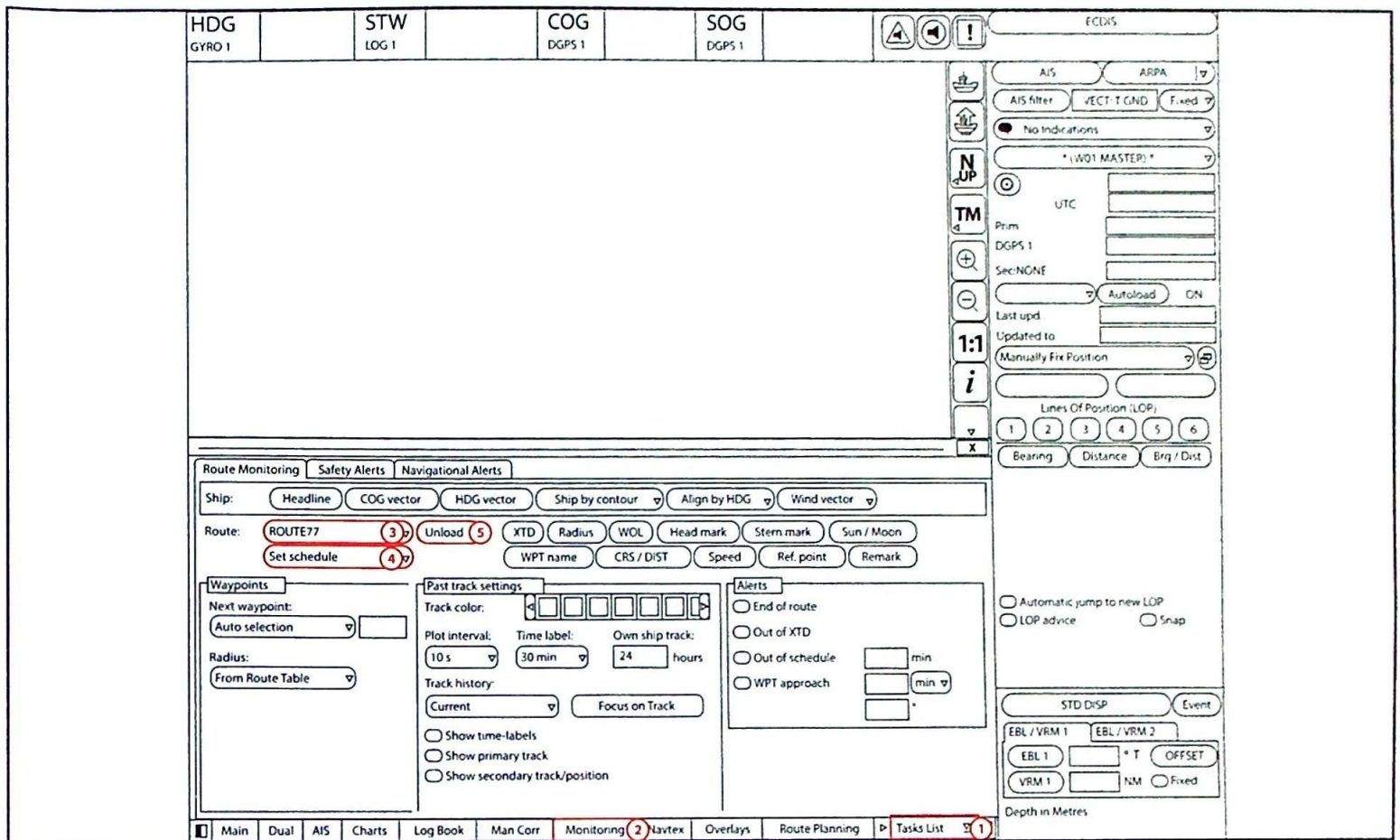
- 1 Ensure 'Route Planning' is enabled in the 'Tasks List'.
- 2 Ensure 'Route Planning' is selected.
- 3 Select 'Check Route'.
- 4 Ensure the route contains waypoints.
- 5 Dropdown shows areas to be checked for errors.
- 6 Click to begin check.
- 7 Use left/right arrows to cycle through warnings/alarms.
- 8 Click to highlight the error on the chart.
- 9 Click to accept route check.
- 10 Click to exit/finish route checking.

4.3 Schedule



- 1 Ensure 'Route Planning' is enabled in the 'Tasks List'.
- 2 Ensure 'Route Planning' is selected.
- 3 Select 'Schedule Calculation'.
- 4 Ensure the route contains waypoints.
- 5 Click 'Create Schedule'.
- 6 Insert 'ETA'.
- 7 Insert 'Stay'.
- 8 Insert 'ETD'.
- 9 Insert 'Speed'.
- 10 Click to start calculation.
- 11 Insert a name for the schedule.

4.4 Selecting Active Route



1 Ensure 'Monitoring' is enabled in the 'Tasks List'.

2 Ensure 'Monitoring' is selected.

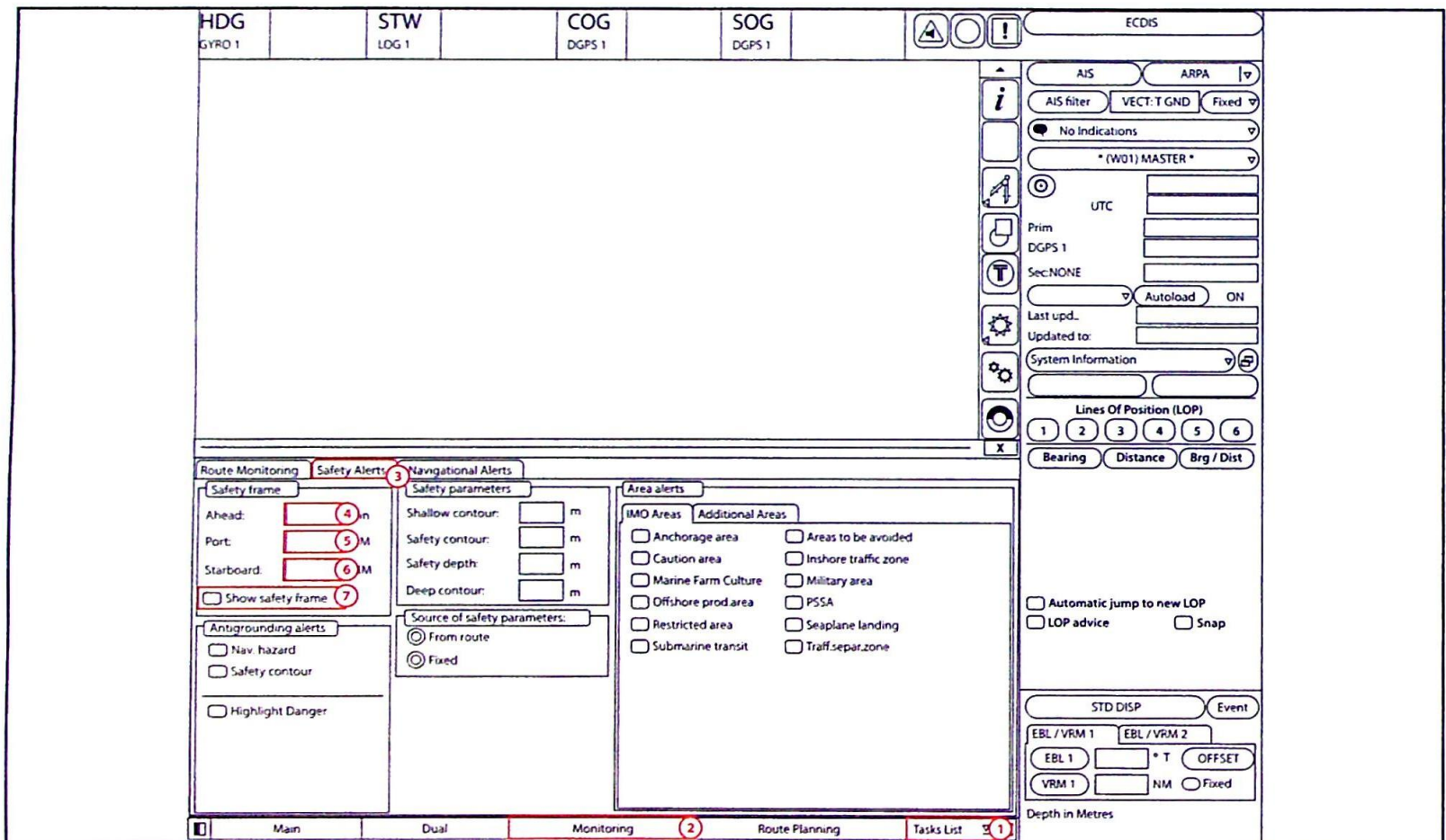
3 Select a route to activate from the 'Route' dropdown menu.

4 Select a schedule to use for your active route from the 'Set schedule' dropdown menu.

5 Select 'Unload' when you have finished monitoring to disable the route.

Section 5: Route Monitoring

5.1 Look-Ahead

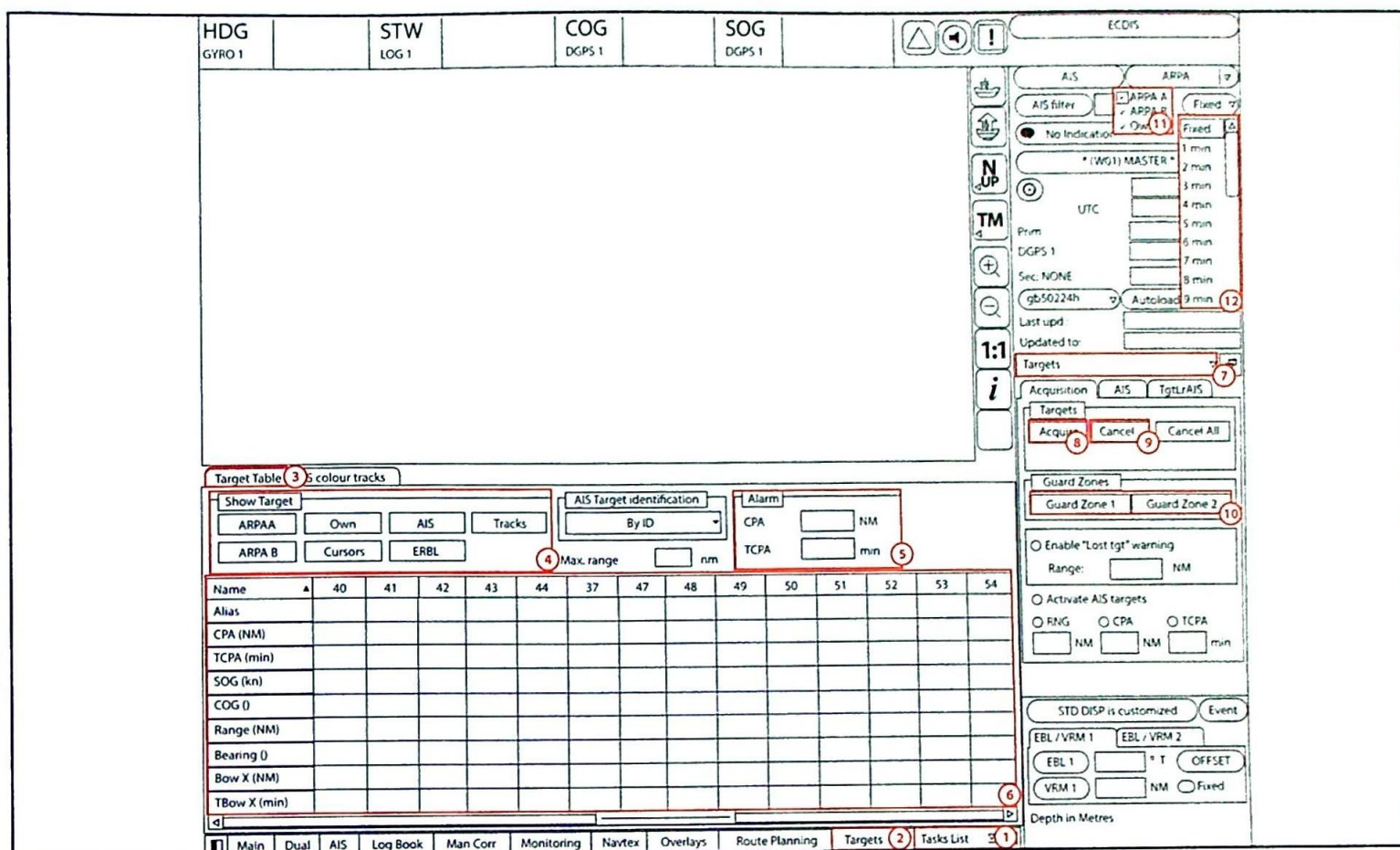


- 1 Ensure 'Monitoring' is enabled in the 'Tasks List'.
- 2 Ensure 'Monitoring' is selected.
- 3 Select 'Safety Alerts'.

- 4 Insert 'Ahead' value, as required.
- 5 Insert 'Port' value, as required.
- 6 Insert 'Starboard' value, as required.

- 7 Ensure 'Show safety frame' is selected.

5.2 TT/AIS/Vectors

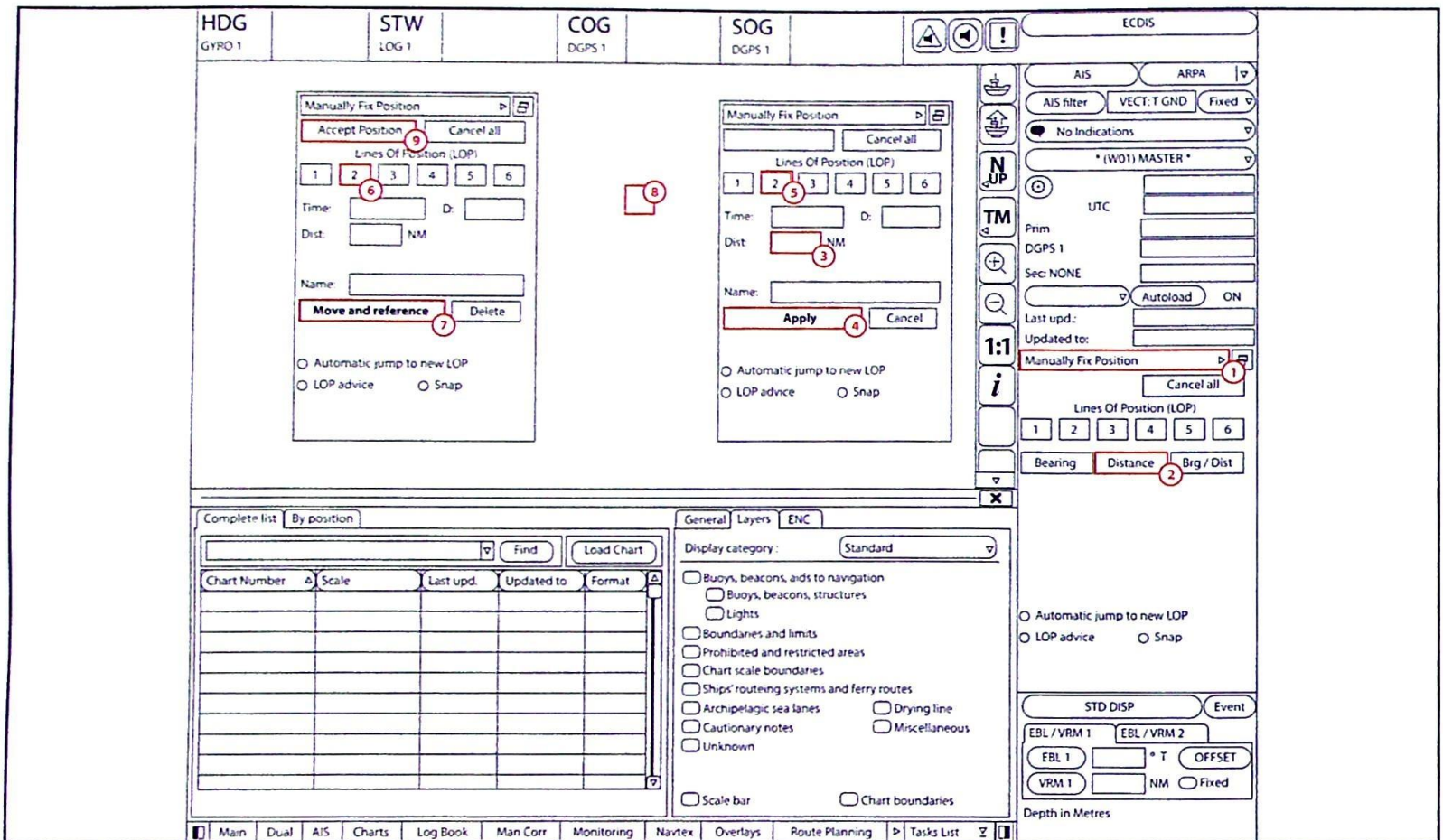


- 1 Ensure 'Targets' is enabled in the 'Tasks List'.
- 2 Ensure 'Targets' is selected.
- 3 Select 'Target Table'.
- 4 Select options to show/hide, as required.
- 5 Set 'Alarm' conditions, as required.

- 6 View 'Target Information' table.
- 7 Select 'Targets' from the dropdown menu.
- 8 Select 'Acquire' and left click on a target to acquire it.
- 9 Select 'Cancel' and left click on a target to cancel it.
- 10 Enable/disable guard zone 1/2.

- 11 Enable/disable 'ARPA' from the dropdown menu.
- 12 Select vector lengths, as required.

5.3 Position Fixing

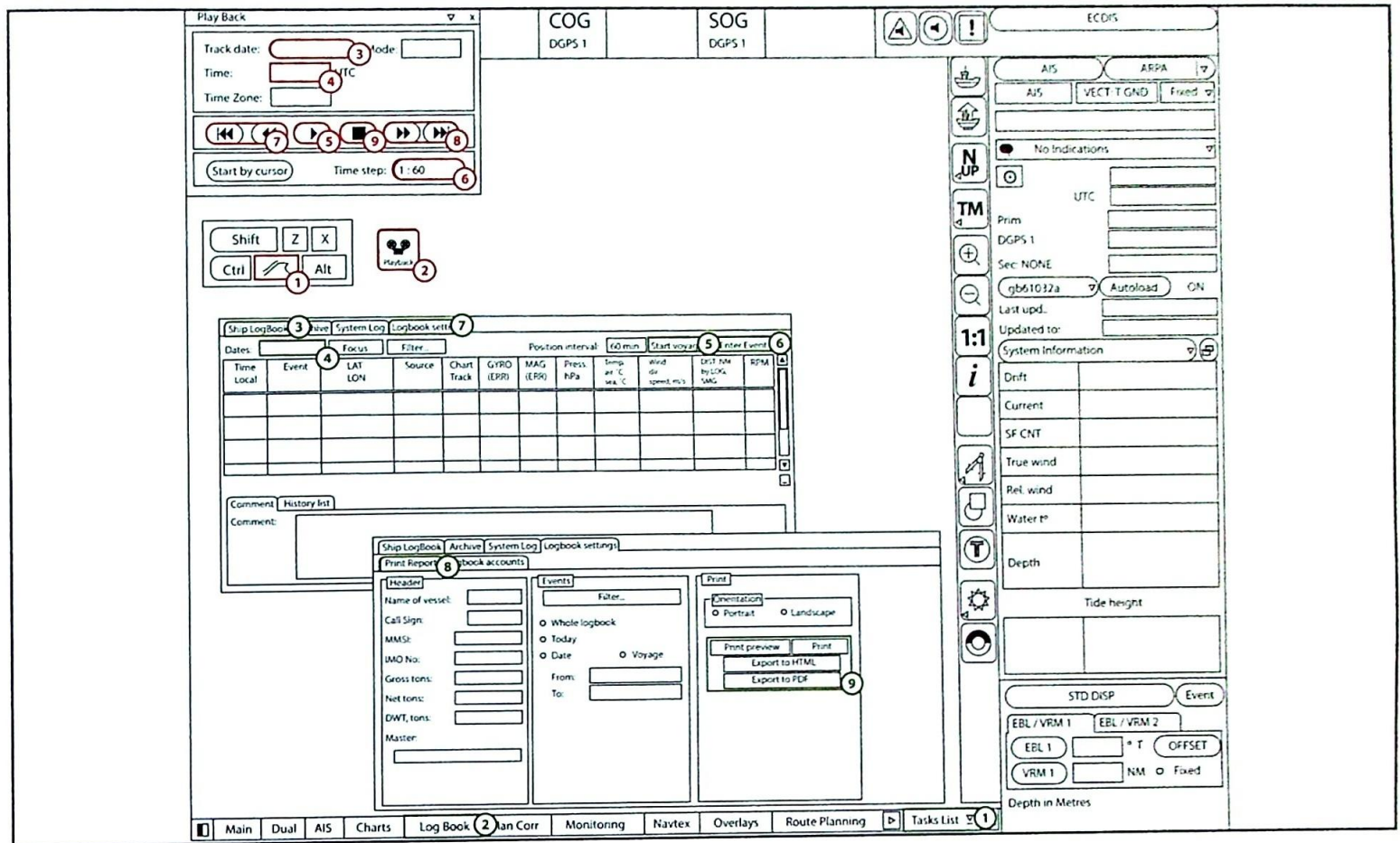


- 1 Ensure 'Manually Fix Position' is selected from the Nav Tools menu.
- 2 Select 'Distance'.
- 3 Insert distance to your reference object.

- 4 Click 'Apply'.
- 5 The next LOP will be enabled.
- 6 Reselect the LOP for which you just added a value.
- 7 Click 'Move and reference'.

- 8 Left click on the reference position on the chart.
- 9 Add as many LOPs as required, then click 'Accept Position'.

5.4 Logs/Playback



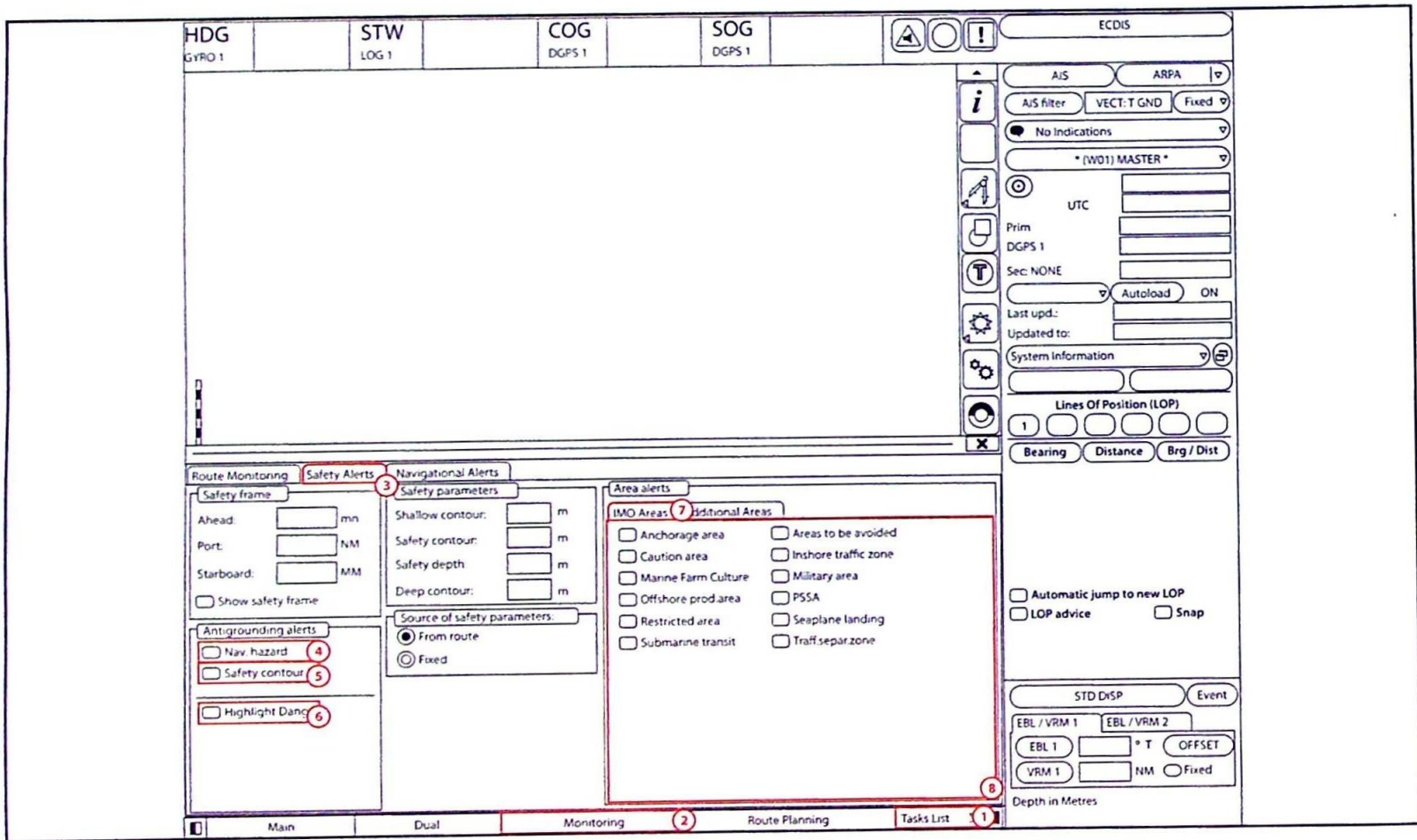
- 1 On your keyboard, press the highlighted button to open your Navi-Planner.
- 2 Click the 'Playback' button and enter your HCRF pin, if required.
- 3 Select a 'Track date'.
- 4 Select a 'Time', as required.
- 5 Click the 'Play' button.
- 6 Select 'Time step', as required.
- 7 Use rewind buttons, as required.

- 8 Use fast forward buttons, as required.
- 9 Press to stop the playback.
- 1 Ensure 'Log Book' is enabled in the 'Tasks List'.
- 2 Ensure 'Log Book' is selected.
- 3 Select 'Ship LogBook'.
- 4 Select dates from the dropdown menu.

- 5 Click 'Start voyage' to log the commencement of a voyage.
- 6 Click 'Enter Event' to log a manual event.
- 7 Click 'Logbook settings'.
- 8 Click 'Print Report'.
- 9 Choose print/export options, as required.

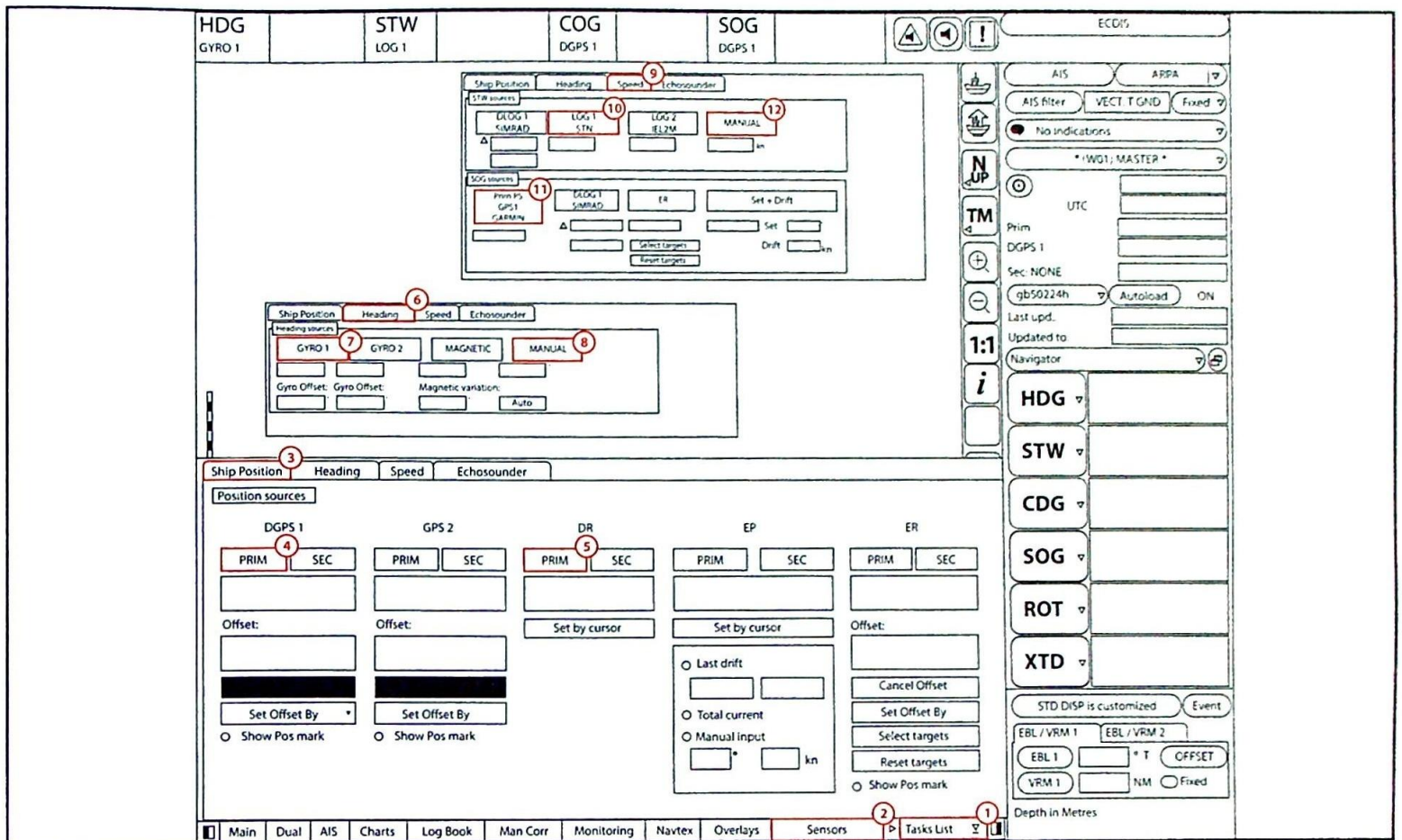
Section 6: System Settings

6.1 Warning/Alarm Configuration



- 1 Ensure 'Monitoring' is enabled in the 'Tasks List'.
- 2 Ensure 'Monitoring' is selected.
- 3 Select 'Safety Alerts'.
- 4 Tick 'Nav. hazard' to enable/disable.
- 5 Tick 'Safety contour' to enable/disable.
- 6 Tick 'Highlight Danger' to enable/disable.
- 7 Select 'IMO Areas'.
- 8 Tick to enable/disable.

6.2 Position/Heading/Speed



1 Ensure 'Sensors' is enabled in the 'Tasks List'.

2 Ensure 'Sensors' is selected.

3 Select 'Ship Position'.

4 Select a sensor as primary.

5 Set 'DR' as primary.

6 Select 'Heading'.

7 Select 'GYRO 1'.

8 Set manual heading.

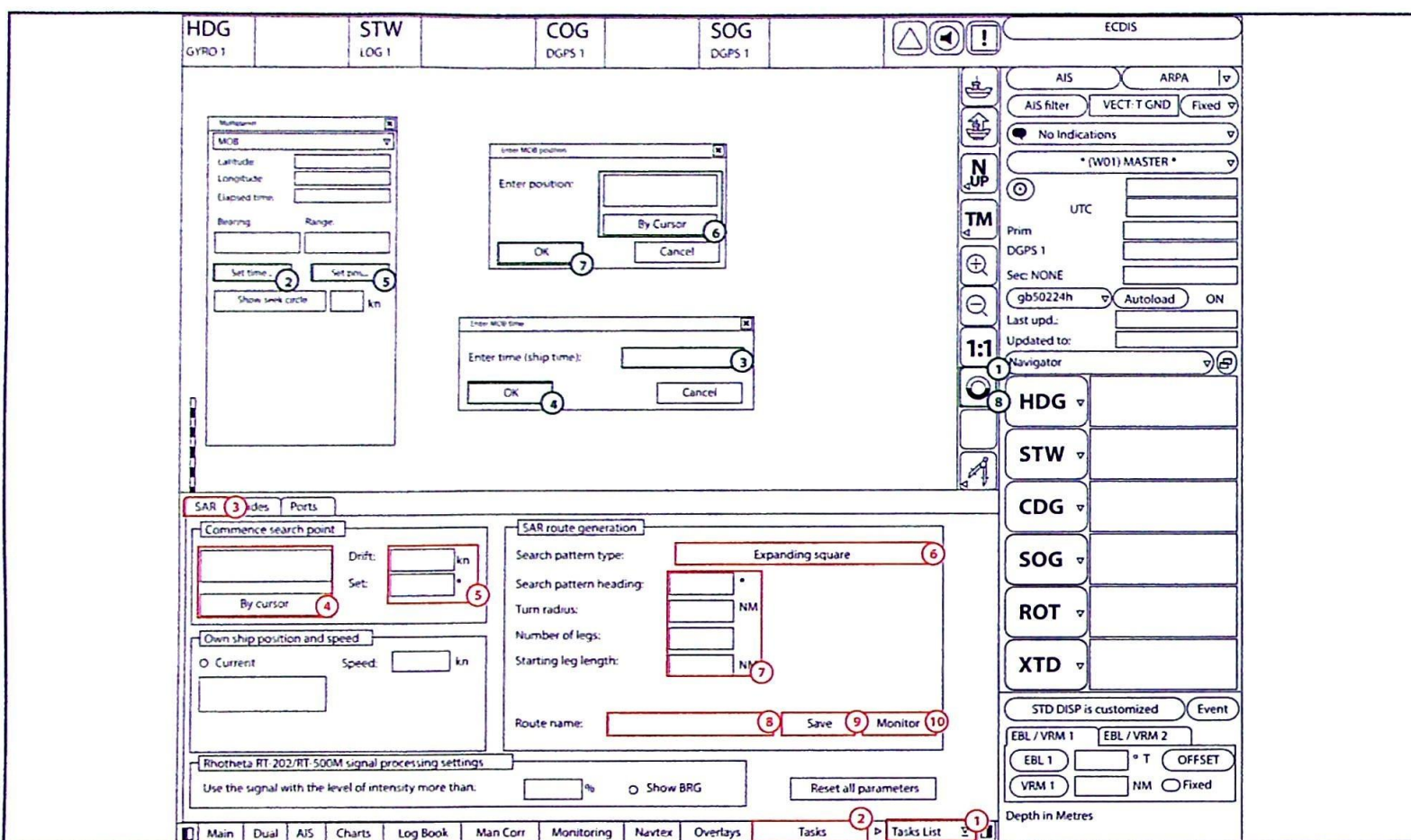
9 Select 'Speed'.

10 Set primary speed log.

11 Set SOG log, if available.

12 Set manual speed.

6.3 Emergency Menus

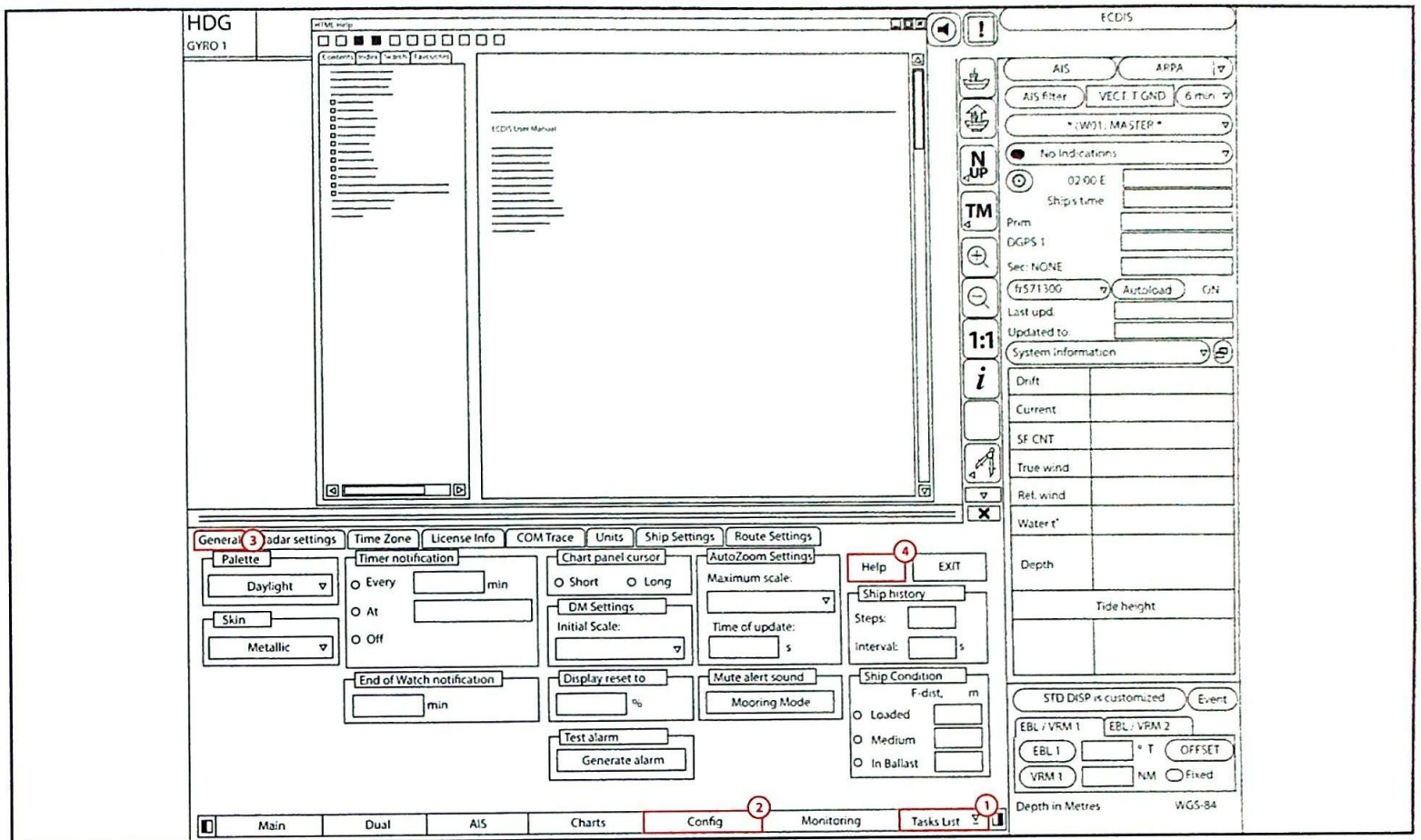


- 1 Ensure 'Tasks' is enabled in the 'Tasks List'.
- 2 Ensure 'Tasks' is selected.
- 3 Select 'SAR'.
- 4 Insert 'Commence search point' position.
- 5 Insert 'Set' and 'Drift'.
- 6 Select search pattern from the dropdown menu.

- 7 Insert search pattern settings.
- 8 Add a name for your SAR.
- 9 Click 'Save' to save the route.
- 10 Click 'Monitor' to save and monitor the route.
- 1 Click the 'MOB' button.
- 2 Click 'Set time...'
- 3 Insert time of MOB.

- 4 Click 'OK' to confirm.
- 5 Click 'Set pos...'
- 6 Insert position manually or by cursor.
- 7 Click 'OK' to confirm.
- 8 Click the 'MOB' button to close the MOB window.

6.4 Manual/About



- 1 Ensure 'Config' has been enabled in the 'Tasks List'.
- 2 Ensure 'Config' is selected.

- 3 Click on 'General'.
- 4 Left click to select 'Help'.

