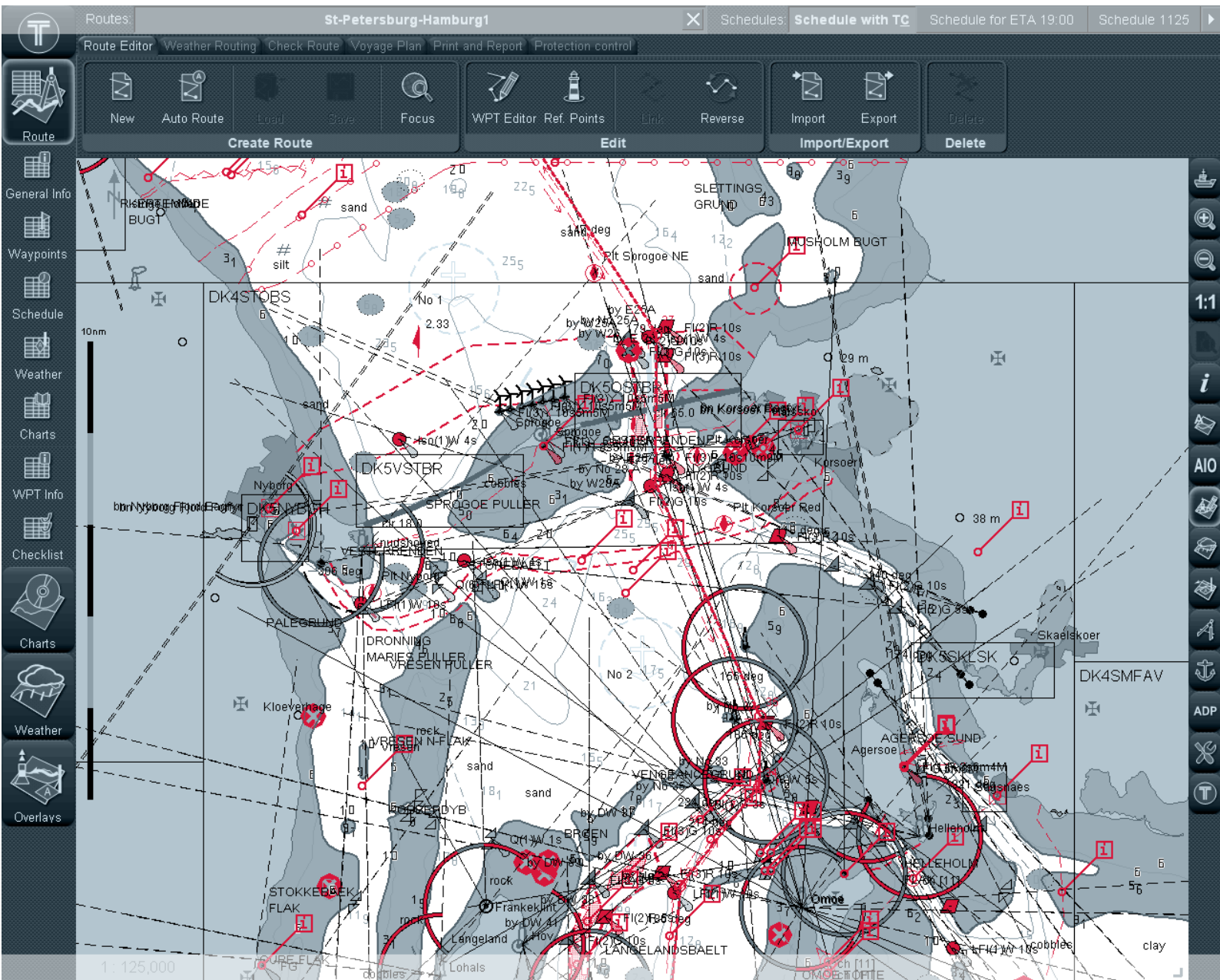


# NAVI-PLANNER 4000

## USER MANUAL

VERSION 3.02.347



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# Printing House Conventions

SAMPLE OF NOTATION	USAGE COMMENTS
Setup.exe	Messages, commands, files, folders and other Windows OS info
<Enter>	Keyboard key names
Start > All Programs	Menu items
Interface	Window names, tabs, icons, checkboxes, buttons, radio buttons and text box captions, and other interface elements, important text
NOTE	Notes
WARNING	Warnings
Auxiliary text	Auxiliary text
<a href="http://www.amver.com">http://www.amver.com</a>	URL

## List of Documents

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). User Manual.

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Functional Description.

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Additional Functions.

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Quick Reference.

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Installation Guide.

Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Utilities.

Fleet Operation System. User Manual (version 1.0.0.0).

Navi-Planner 4000 (v. 3.02.347). User Manual.

# Preamble

Preamble provides general information on the work with document.

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<b>Annotation</b> .....	<b>11</b>
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# Annotation

The aim of this book is to provide the user with guidelines in the solution of various tasks, which may arise during the voyage planning.

The description is divided into 11 parts:

- Chapter 1. Navi-Planner Adjustment and User Interface.
- Chapter 2. Routes and Schedules.
- Chapter 3. Voyage Plan.
- Chapter 4. Electronic Charts and Chart Information.
- Chapter 5. Maps.
- Chapter 6. Tides and Currents.
- Chapter 7. Weather Forecasts.
- Chapter 8. Admiralty Digital Publication.
- Chapter 9. MARPOL Data.
- Chapter 10. Routing Charts.
- Chapter 11. Status Information.

# Abbreviations

- ADLL – Admiralty Digital List of Lights;
- ADP – Admiralty Digital Publication;
- ADRS – Admiralty Digital Radio Signals;
- ARCS – Admiralty Raster Chart System;
- ATT – Admiralty Total Tide;
- AVCS – Admiralty Vector Chart Service;
- ECDIS – Electronic Chart Display and Information System;
- ENC – Electronic Navigational Chart;
- ERBL – Electronic Range and Bearing Line;
- ETA – Estimated Time of Arrival;
- ETD – Estimated Time of Departure;
- GC – Great Circle;
- GMT – Greenwich Mean Time;
- INFO – Information;
- m – meter;
- min – minute;
- MFD – Multi Functional Display;
- MMSI – Maritime Mobile Service Identities;
- NAVTEX – Navigational Telex;
- NM – nautical mile;
- NS – Navi-Sailor;
- RL – Rhumb Line;
- s – second;
- TTG – Time to Go;
- UKC – Under Keel Clearance;
- UKHO – The United Kingdom Hydrographical Office;
- UTC – Universal Time Coordinated;

- WOL – Wheel Over Line;
- WPT – Way Point;
- XTD – Cross Track Distance.

# Navi-Planner Adjustment and User Interface

This chapter describes the procedure of Navi-Planner 4000 software adjustment, principles of building its User Interface and procedure used for starting/exiting from the Navi-Planner 4000

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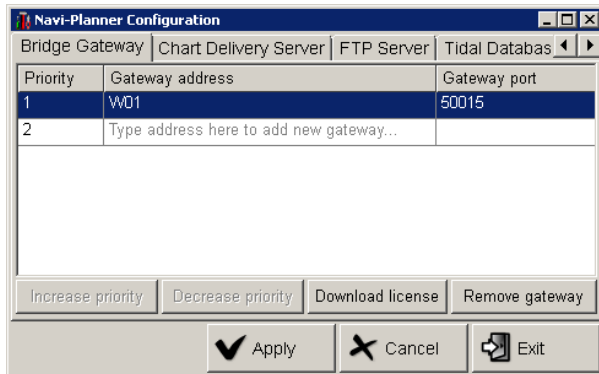
<b>Navi-Planner 4000 Configuration</b> .....	<b>14</b>
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# Navi-Planner 4000 Configuration

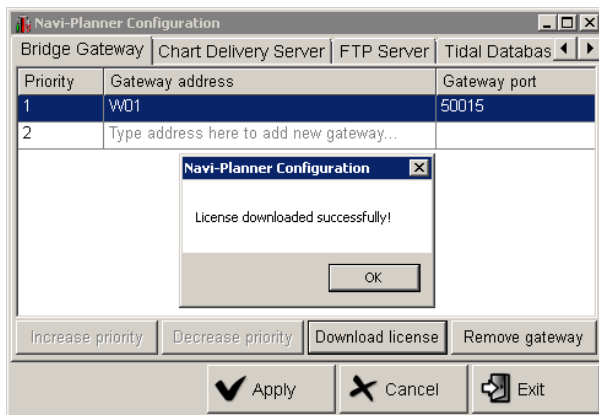
Run Navi-Planner 4000 config by selecting the appropriate item in the **Start** menu (**Start/Programs/Navi-Planner4000/Navi-Planner Configuration**):



1. If Navi-Planner 4000 is installed with MFD open **Bridge Gateway** page.

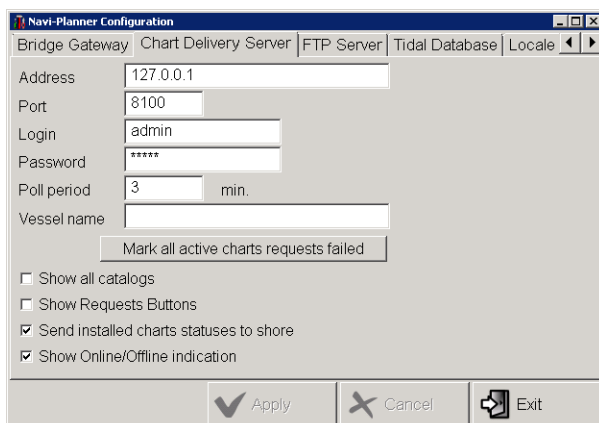


Select the WS on which MFD is installed. Press **Download license** button.



Press **OK** button.

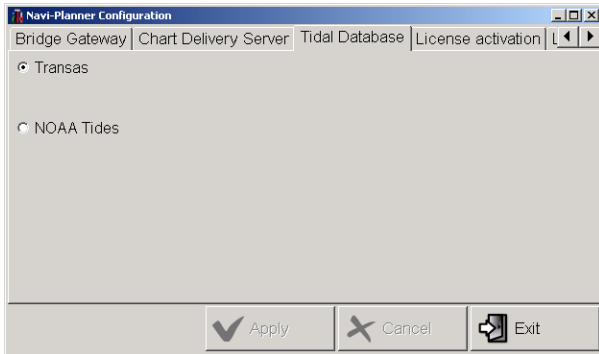
2. Open **Chart Delivery Server** page.



In **Address** input box specify the computer name or IP address of the WS on which the Chart Delivery Server is installed.

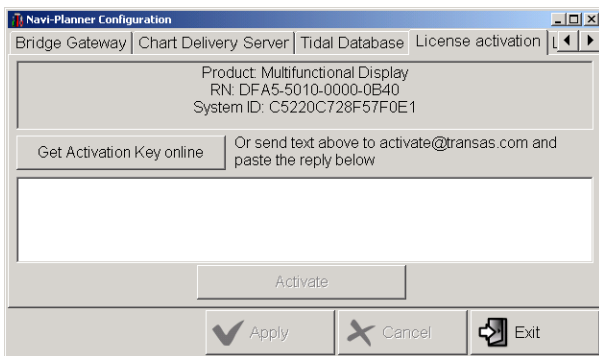
If you have to wait long for orders form the Chart Delivery Server, to cancel all the orders, press the **Mark all active charts requests failed** button.

3. Open **Tidal Database** page.

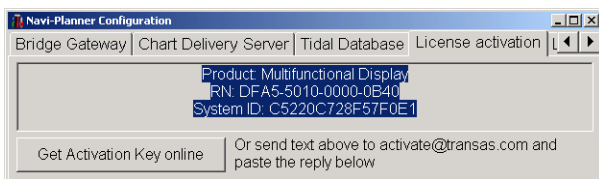


Specify databases sources required for work with the Navi-Planner 4000.

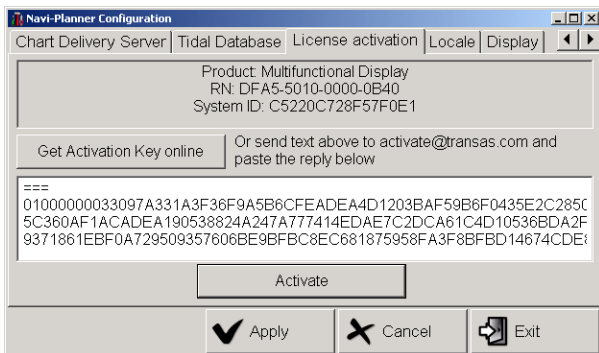
4. If the keyless protection is used open **License activation** page.



If there is no Internet connection, copy information (as shown in the figure below) and e-mail it to [activate@transas.com](mailto:activate@transas.com).

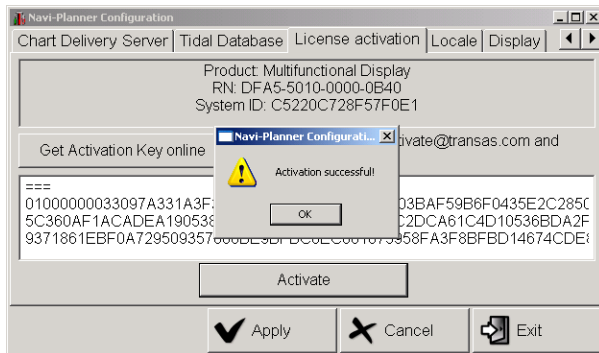


If there is an Internet connection, press the **Get activation key online** button.



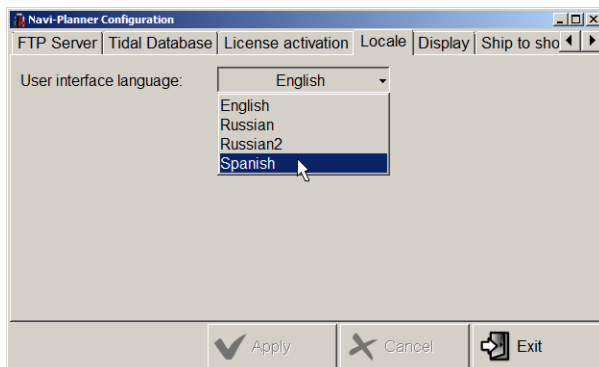
After a certain time interval, the key will be generated and received by the user automatically. Upon receipt of the key by an e-mail letter, it should be copied to a relevant window.

After receiving the key, press **Activate** button.



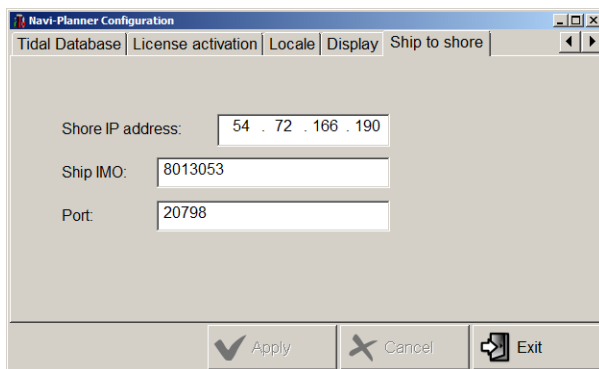
After the activation is completed, press the **OK** button.

5. Open **Locale** page.



From the **User interface language** drop-down list select the necessary language of the Navi-Planner 4000 interface.

6. Open **Ship to shore** page.



In the **Shore IP address** and **Port** input boxes specify the IP address and Port of the shore-based computer which will be used for communication with Navi-Planner 4000. Specified by default is the Fleet View Online address, the web based tracking service.

Use the **Ship IMO** input box to specify the ownship IMO number.

After completion of settings press the **Apply** button to save all changes done without exiting the NPL Config utility; or press the **Exit** button to save all settings and exit the NPL Config utility.



# Protecting Access to Resources

Transas Integrator software facility is intended for:

- Protecting access to Windows or software resources;
- Running manually the tasks included in the MFD.

When using Navi-Planner 4000, the user does not have the ability to modify or delete any folders, files or software that are required to operate in accordance with the standards. In this way, using the Transas Integrator utility, the data used during operation and stored in the system are fully protected.


To call **Transas Integrator** window, press the <Ctrl> + <Alt> + <I> combination of the buttons on ES6 keyboard or button on the Chart panel toolbar of the Navi-Planner 4000. The menu allows tasks to be run. Some tasks required input of a password and area accessible for the system engineer only.

## Navi-Planner 4000 Turning On/Off

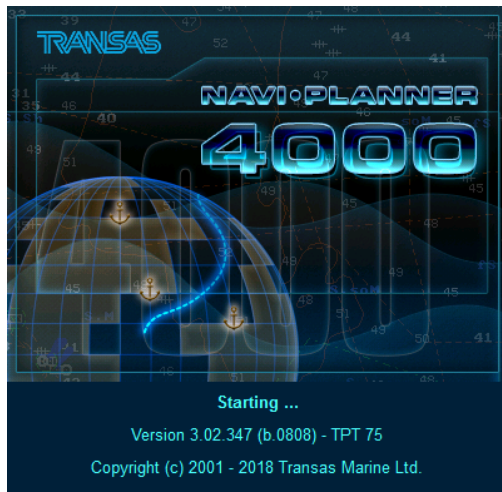
### Turning the Navi-Planner 4000 On

1. Run Navi-Planner 4000 by selecting the appropriate item in the **Start** menu (**Start/Programs/Navi-Planner4000/Navi-Planner**):




2. If Transas Integrator is installed, to turn on Navi-Planner 4000 press **Navi-Planner** button .

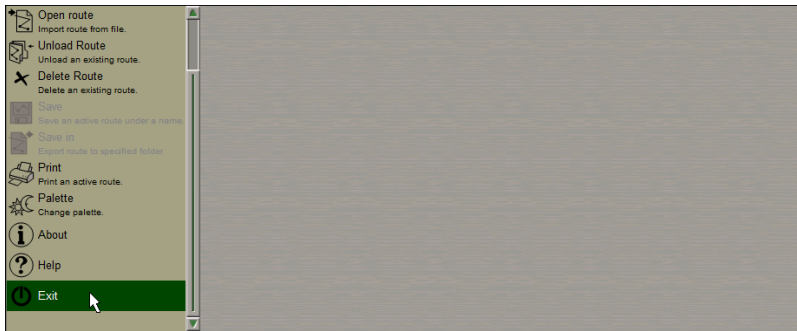
The following window will be displayed on WS upon start of Navi-Planner 4000 loading.



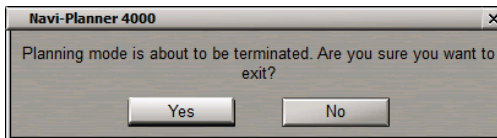
After the program loading, the Navi-Planner 4000 screen will be displayed.

## Turning the Navi-Planner 4000 Off

Press  button in the Task Selection Area.



Select **Exit** item from the drop-down menu, the confirmation window will appear.

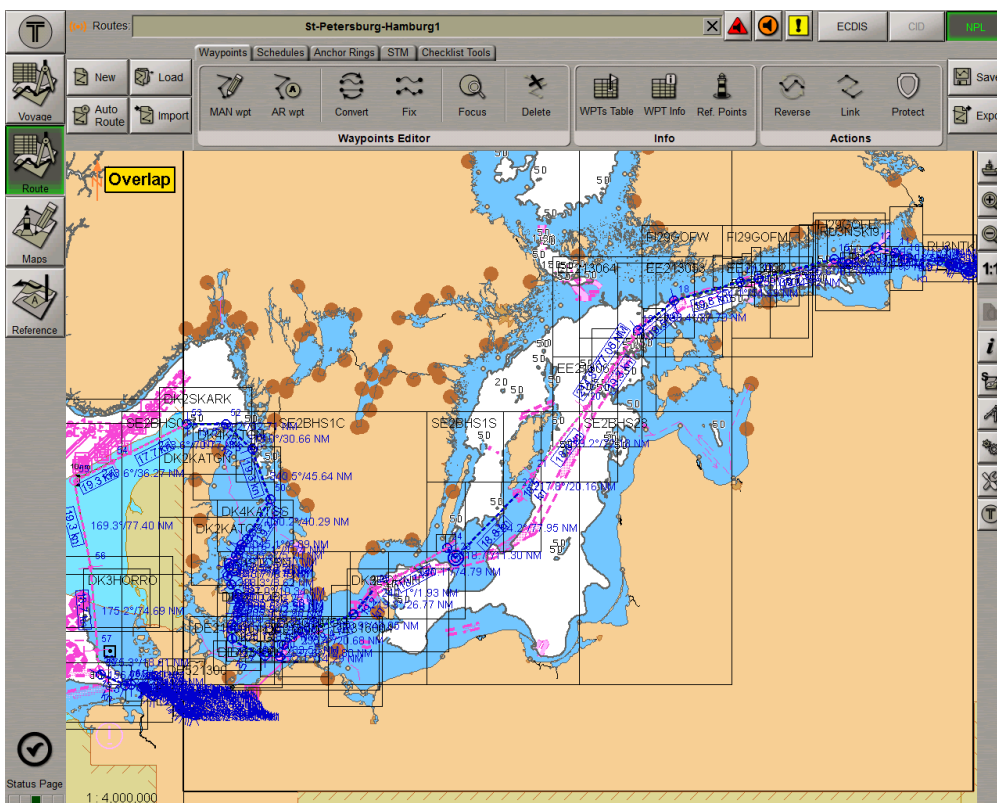


Press **Yes** button to confirm exit from the program. The program will be closed.

## User Interface

### Navi-Planner 4000 Screen

The main purpose of the Navi-Planner 4000 screen is to display the ship location and routes, as well as the navigational and reference data on the electronic chart. Also information on additional data and control tools are displayed on the screen.



The Navi-Planner 4000 screen can be arbitrarily divided into the following areas:

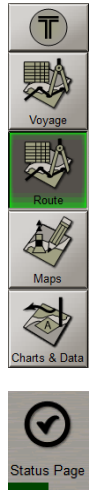
- Task Selection;
- Ribbon;
- Chart Panel;
- Task Information Tables.

## Task Selection

Navi-Planner 4000 has 4 main tasks: **Voyage**, **Route**, **Maps** and **Charts&Data**. They are selected by using the relevant button in the Task Selection Area in the top left part of the Navi-Planner 4000 screen.

Selection of a task determines contents of the rest of the Navi-Planner 4000 screen areas.

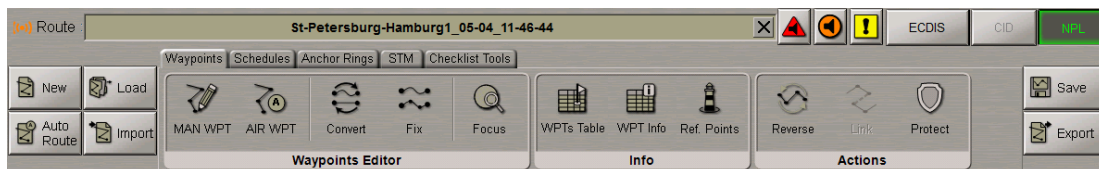
This area also incorporates the Transas button . Activation of this button allows work with files used in the selected task, and selection of the screen colour palette to suit the outside illumination.



In the bottom part of the Task Selection Area, there is the **Status Page** button which opens up the window containing information on the status of all the Navi-Planner 4000 data and processes. And also the indicator, signalling the system's ability to work.

## Ribbon

The Ribbon is intended for work with the main functions within the framework of the selected task. This functionality is organised in the form of a set of tabs.



Each tab is split into groups which combine functional buttons used for accomplishment of a certain subtask.

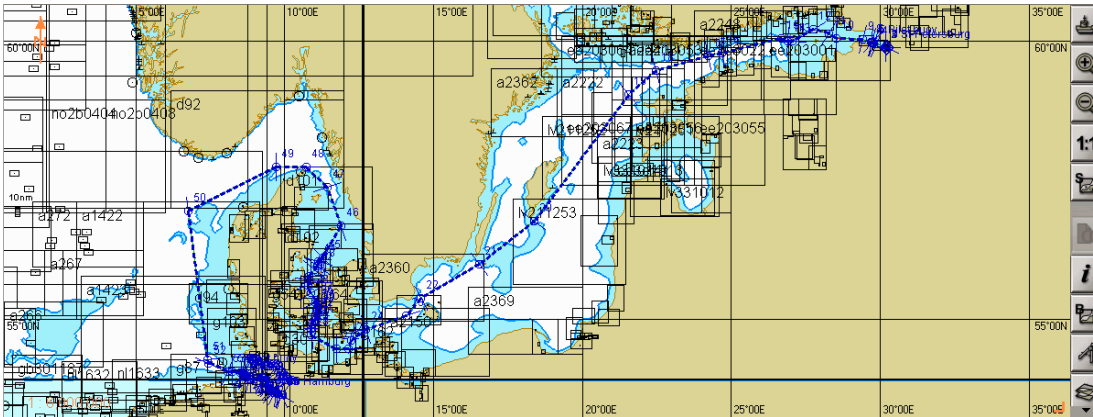


## Chart Panel

The Chart Panel is designed for the following purposes:

- To display electronic charts showing classes of chart information (determined on **Charts** task);
- To display the own ship symbol with motion vectors;
- To display the routes.

Displayed in the top left corner of the Chart Panel is the panel orientation symbol: an arrow showing direction to the north.



The Chart Panel toolbar contains the following buttons:



- to return the own ship symbol display to the Chart Panel;



- to increase the chart display area scale;



- to decrease the chart display area scale;



- to display the chart in the original scale;



- to open the panel for viewing HCRF format charts;



- to switch presentations of standard chart display;



- to activate the cursor Info for obtaining information;



- to switch presentations of different chart display types (except for Standard chart display);



- to turn on/off Quick Distance Tool and select the mode of distance measurement;



- to turn on/off additional layers on the Chart Panel;



- to open **Setting** window;



- to open **Transas Integrator** toolbar.

## Task Information Tables

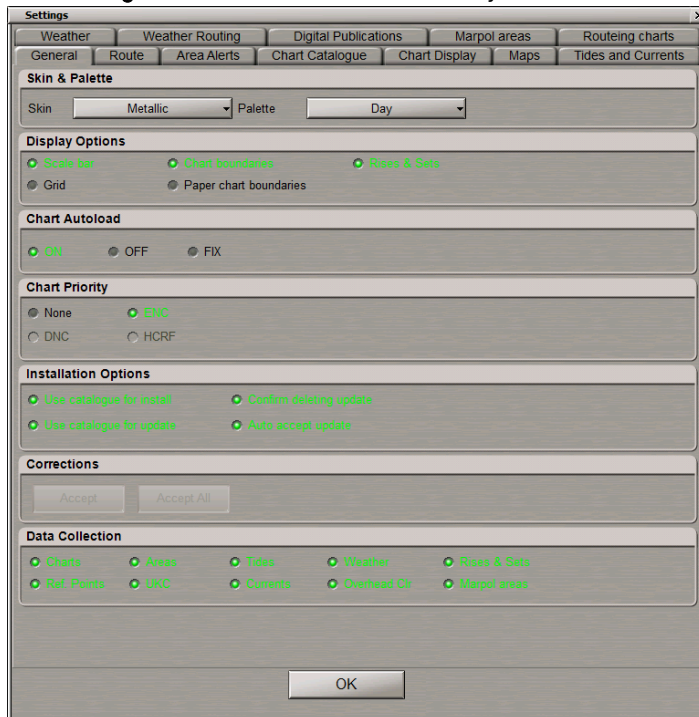
The Task Information Tables are intended for the display and input of information within the framework of the selected task.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0	St-Petersburg	59° 53.635 N 030° 13.243 E	XX	XXX.X XXX.X	XXX.X	XXX.X XXX.X	XXX.X		XXX.X	XXX.X	XXX.X	XXX.X	XXX.X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM		10.0 m	0.8 m	1.2 m	5.0 m	
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM	Pilot on board	10.0 m	0.8 m	2.2 m	5.0 m	
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	2.5 m	5.0 m	
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	5.0 m	5.0 m	
5	Pilot buoy	59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM	Pilot disembarkation. Slow speed.	10.0 m	0.8 m	9.2 m	5.0 m	70.0 m
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	9.2 m	5.0 m	
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		10.0 m	0.8 m	9.0 m	5.0 m	

The display of tables is turned on by using the appropriate buttons in the Ribbon (see below).


## Settings Window

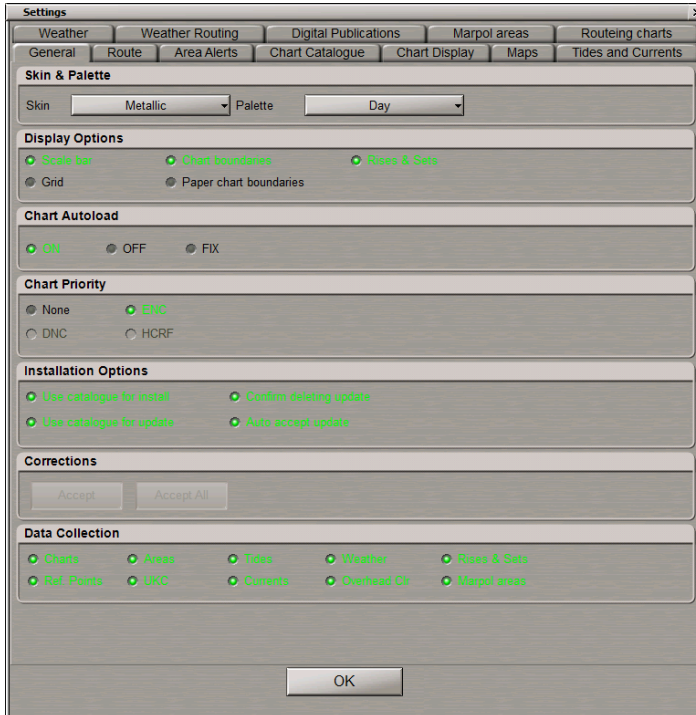
The **Settings** window is intended for the adjustment Navi-Planner 4000 configuration.



**Settings** window consists of the pages that are having settings for appropriate tasks.

## Previous Settings

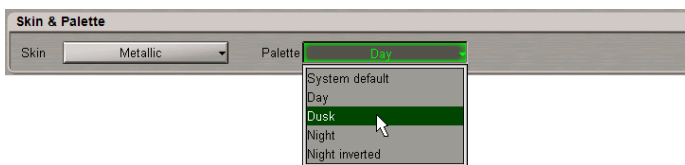
Press the  button in the toolbar of the Chart Panel. The **Settings** window will open up



To close the window press **OK** button.

## Setting of Screen Colour Palette

Switch to **General** page. In the **Palette** list of **Skin&Palette** group, select the screen colour palette to suit the outside illumination.



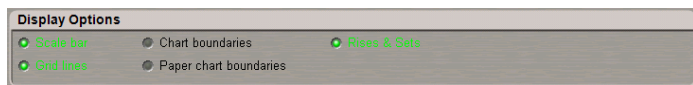
## Setting of Screen Graphic Presentation

Switch to **General** page. In the **Skin** list of **Skin&Palette** group select the necessary screen graphic presentation.



## Controlling of Individual Chart Instruments

Switch to **General** page.



In **Display Option** group check if necessary the following checkboxes:

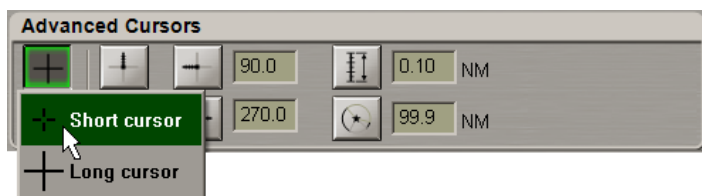
- **Scale bar** – to turn on the display of chart scale graphic presentation (in the left-hand part of the screen);
- **Grid lines** – to turn on the display of the coordinate grid;
- **Chart boundaries** – to turn on the display of ship folio chart boundaries;
- **Paper chart boundaries** – to turn on the display of ship folio paper chart boundaries;
- **Rises & Sets** – to turn on the display of rises and sets symbols.

## Selecting Graphics Cursor Form

The graphics cursor is used during the operation of some functions and represents an intersection of lines corresponding to the latitude and longitude of the given point, but the form of the graphics cursor can be changed as required.

Switch to **Route** page.

Press button in **Advanced Cursors** group and select the type of the graphics cursor from the drop-down menu:

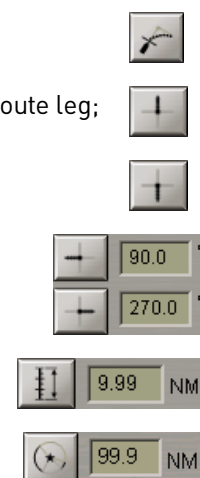


- Short cursor – the cursor is shown in the form of a small cross;
- Long cursor – the cursor is shown in the form of an intersection of two lines across the entire Chart Panel.

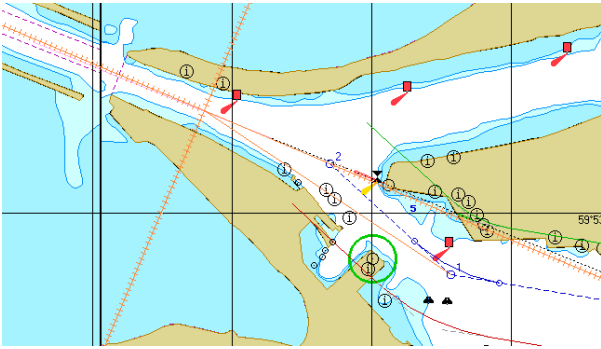


By default, the Standard cursor mode is set. To turn on additional graphic cursor tools, press the appropriate buttons of the **Advanced Cursors** group:


- To plot waypoints taking into account the WOL and F dist;
- To display the line (Heading Mark) ahead of the cursor position in the direction of the plotted route leg;
- To display a line opposite to the Heading Mark from a waypoint;
- To display two additional lines setting their angles relative to Heading Mark line;
- To display and set range marks on the cursor lines;
- To plot waypoints taking into account the lighthouse visibility range, which is set in the box to the right.



The advanced capabilities of the graphic cursor prove to be useful in, e.g. planning a route along the lead lines.




## Using of Quick Distance Tool

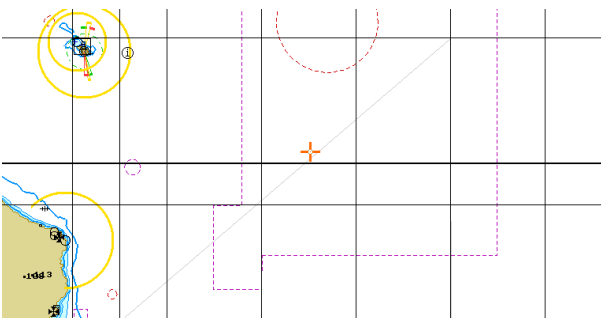
For the Quick Distance Tool operation, press the  button on the Chart Panel toolbar.

Select the necessary method of distance measurement.



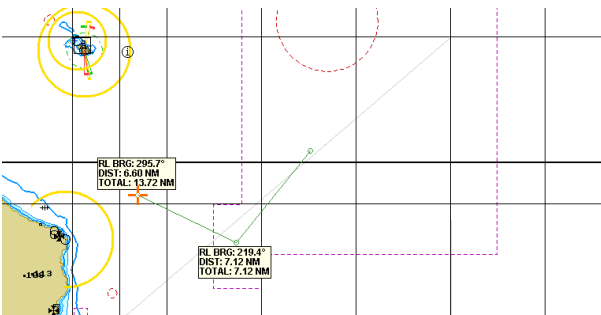
Graphics cursor appears on the Chart Panel .

Position the graphics cursor on the initial measurement point on the Chart Panel and press the left trackball button.



Position the graphics cursor on the next point on the Chart Panel and press the left trackball button. The distance measured from the initial point and bearing from the initial to the set point will be shown on the Chart Panel.

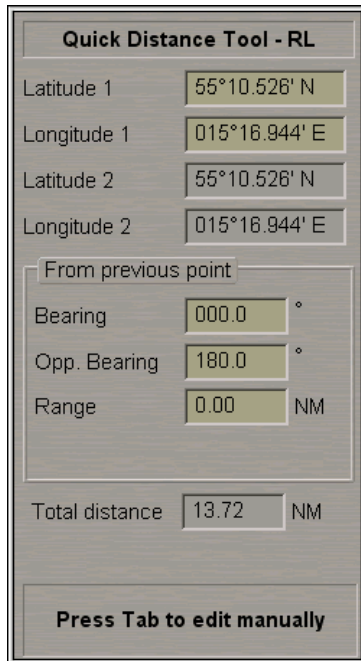
Set the necessary number of points for the distance measurements.





The information window in the bottom part of the Control panel displays the following data:

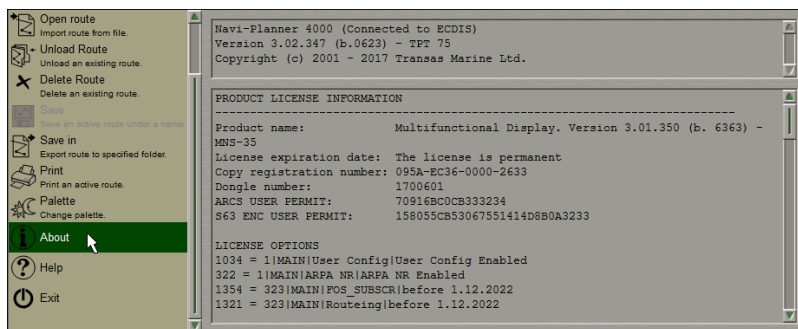
- **Latitude 1/Longitude 1** – coordinates of the graphics cursor;
- **Latitude 2/Longitude 2** – coordinates of the last set measurement point;
- **Bearing/Opp. Bearing** – bearing (reverse bearing from the last set point to the cursor);
- **Range** – distance from the last set point to the cursor;
- **Total distance** – total distance from the first set point to the cursor.



To exit from the graphics cursor mode, press the right trackball button.

## Obtaining Information on Current Licence

Press the Transas button  and select **About** item from the drop-down menu.



The right-hand part of the drop-down menu will display data on the MFD or Navi-Planner 4000 (for standalone version) software product license and the functions allowed to be used (licensed). This page also specifies the installed MFD (Navi-Planner 4000) version.

# Routes and Schedules

This chapter describes the procedure used in the handling of routes and schedules.

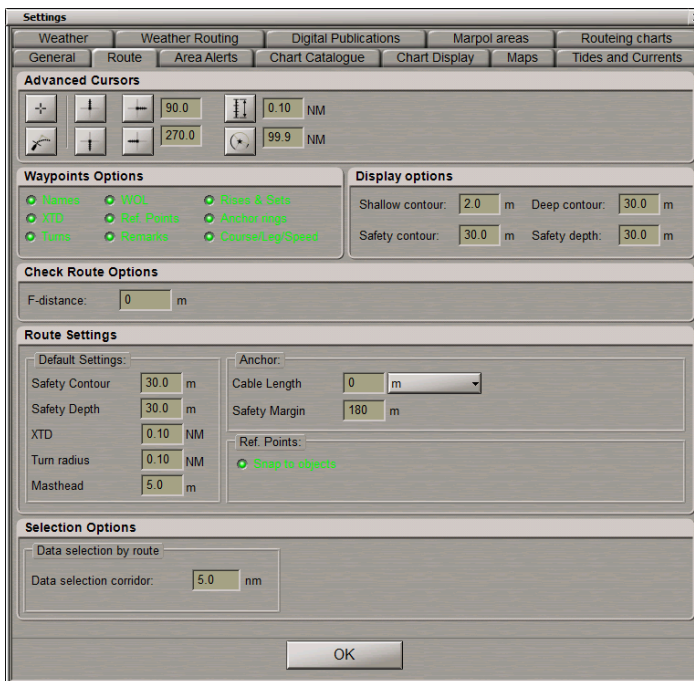
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# Creating a Route

## Default Route Settings

For default route settings press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Route** page.



The **Route Settings** group is intended for setting the default values of route elements. Set the following values which will be used during the route plotting:

- **Safety Contour** - safety contour value for the route legs;
- **Safety Depth** - safety depth value for the route legs;
- **XTD** - cross track distance values (simultaneously for the port and starboard sides) for the route legs;
- **Turn radius** - turn radius value for a WPT;
- **Masthead** – distance from the lowest point on the keel to highest point on the mast.

These values for route elements can subsequently be changed in the course of route editing (see below the *Entering Additional Data* paragraph).

In the **Anchor** group, use the **Cable Length** and **Safety Margin** input fields to set the default values for respective parameters that will be used for the anchoring operations (see section *Anchorage Planning* and document *Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). User Manual, Chapter 9, section Work with Route, paragraph Anchoring Operations*).

The **Snap to objects** checkbox in **Ref. Points** group is checked by default, in this case the reference point will be referenced to the object automatically if it is not farther than 0.2 mile from the graphic cursor.

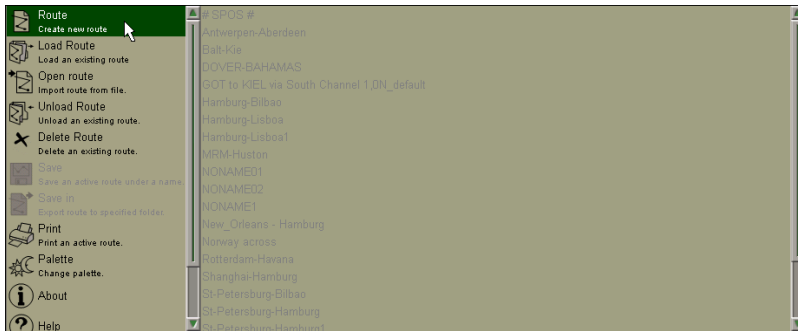
In **Data selection corridor** input window of **Selection Options** group set the width of the corridor along the route for the weather and APD requests (5 miles are set by default).

# Plotting Route

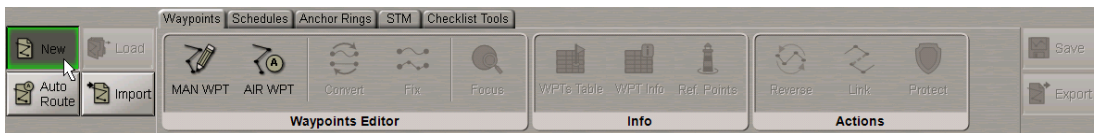
Press **Route** button in the Task Selection Area to switch to **Route** task.



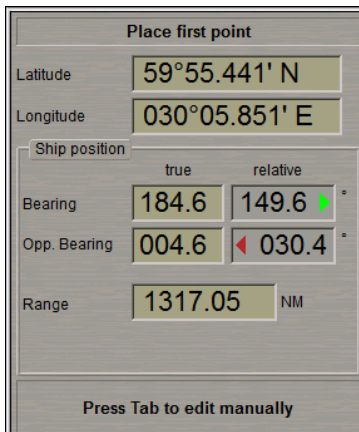
Press the Transas button  and select **Route** item from the drop-down menu.



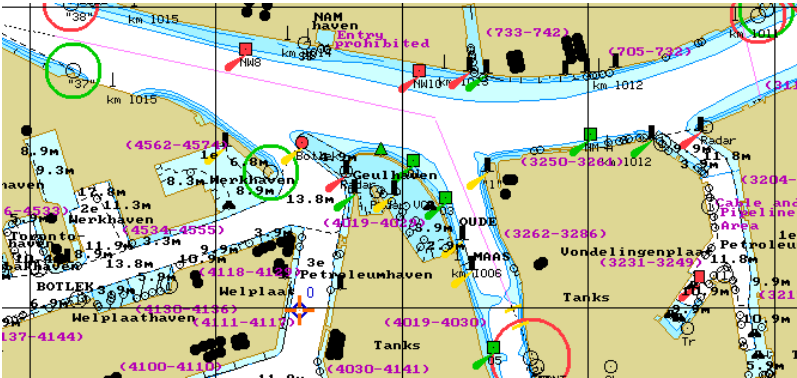
A similar result can be obtained by using the Ribbon. Press the **New** button in the left side of the ribbon.



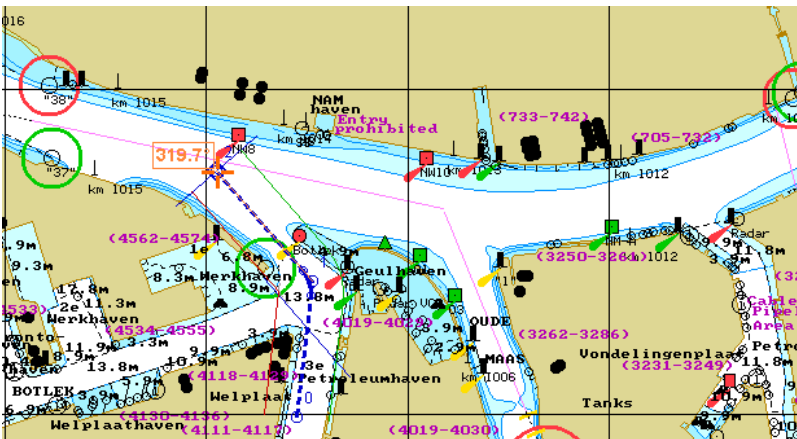
Graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display **Place first point** information window.



Set the cursor in the start point coordinates by moving the trackball, using the data in **Place First Point** window, and press the left trackball button.

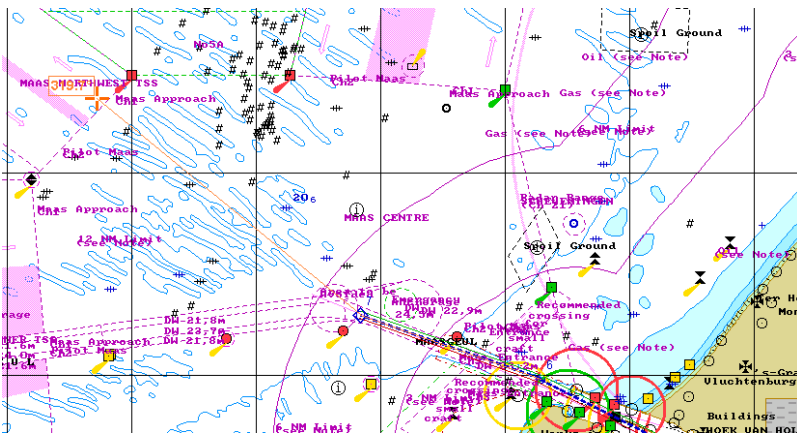


The symbol of the start point with its number ("0") will appear on the Chart Panel. Position the cursor in the coordinates of the next point. At this stage, a route leg line will be drawn between the cursor and the start point. Press the left trackball button: the Chart Panel will display the next point symbol with "1" for number and the plotted route leg. By default, XTD lines are also shown. To turn off their display, use **Waypoints Options** group in **Option** tab (see below).

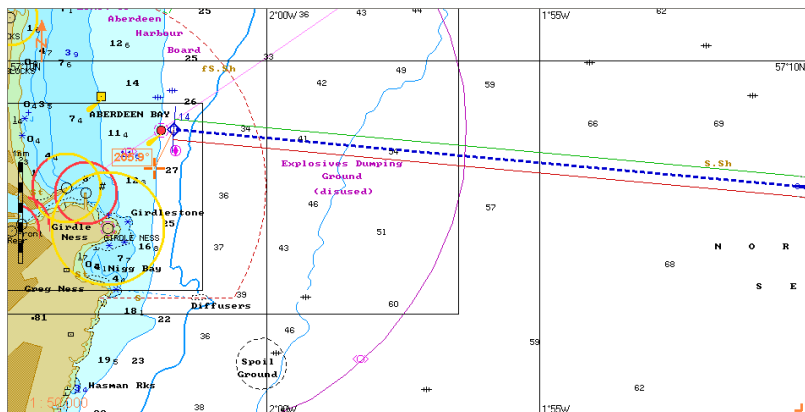


If it is necessary to set several waypoints, repeat the trackball moving and left button pressing operation as many times as there are WPT's required to be set.

If the cursor is positioned beyond the Chart Panel boundaries, it will be re-drawn automatically so that there is always a chart from the chart folio under the cursor.



After the setting of the last point of the planned route, double click the right trackball button: the cursor will exit from the route planning and editing mode and will assume the form of the free cursor.



The generation of the route is completed.

## Entering Additional Data

In the Ribbon switch to **Waypoints** tab and press **WPTs Table** button in **Info** group .



The bottom part of the screen will display the corresponding table.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0		59° 53.635 N 030° 13.243 E	XX	XXX X XXX X	XXX X	XXX X XXX X	XXX X		XXX X	XXX X	XXX X	XXX X	XXX X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
5		59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined

**Waypoints** table consists of the following data (by columns):

- **WPT** – WPT number;
- **Name** – WPT name;
- **Position** – WPT latitude and longitude coordinate;
- **Leg type** – route leg type (RL or GC) from the previous to the current WPT, set by the operator; all route leg calculations are referred to the WGS-84 reference datum;
- **Leg** – course and distance from the previous to the current WPT;
- **Total distance** – summary distance between the initial (0) and current WPT by the route legs;
- **X PORT/X STBD** – safe zone to the left and to the right of the route leg (these values will be used for selecting data from the catalogue, for the delivery of charts, weather delivery, ADP in the route reports);
- **Turn radius** – operator-set radius of the arc for the display of an approximate ship track on the turn;
- **Remarks** – operator-set remarks;
- **Draught** – manual input of the ship draft on each leg;
- **Squat** – operator-set squat for own ship;

- **UKC** – under keel clearance. The UKC column data is entered after the data collection. There are the following results might be obtained in the column:
  - **10,6** – calculated UKC value in metres (result of difference between Draught and value from chart). The chart values are: Official (Depth value [DRVAL1,]); Non official – soundings;
  - **Shallow water** – the difference between Draught and chart depth value is negative. Shown in red bold;
  - **Nav. Danger** – isolated object is found. The isolated objects such as: rocks, wrecks, obstructions. If an isolated object is having the value of sounding, then that value is being used for the UKC calculation. Shown in red bold;
  - **> 50.0 m** –the calculated UKC value is more than 50 metres.
- **Masthead** – distance from the lowest point on the keel to highest point on the mast;
- **Overhead clearance** – distance from the highest point on the mast to the height of lowest obstruction. There are the following results might be obtained in the column:
  - **32.1** – calculated overhead clearance value in metres (for the calculation formula see *Chapter 4*, section *Voyage Plan Creation*, paragraph *Input of General Voyage Data*);
  - **14.2 m manual** – overhead clearance value entered manually. Shown in black italic;
  - **Not passed** – value is negative. Shown in red bold;
  - **Obstacle** – appears when an obstruction is found, but its height is unknown.
- **Ref. point** – reference point name taken from the chart object after the data collection (if the object has no name, the cell is empty);
- **BRG/Dist** – bearing and distance to the reference point;
- **Safety contour** – safety contour value to the current route leg;
- **Safety depth** – safety depth value to the current route leg.

For input of the additional data, perform the procedures detailed below:

- position the cursor on **Name** element cell; double click the left trackball button to activate the cell;
- enter the WPT name; press <Enter> key;
- position the cursor on **Leg type** element cell; double click the left trackball button to activate the cell;
- press the button in the right-hand part of the cell and select the sailing type from the list which will open up;
- press the left trackball button to confirm the changes you have made;
- position the cursor on **X PORT/X STBD** element cell; double click the left trackball button to activate the cell;
- edit XTD value to the left of the route leg; press the left trackball button;

Name

Name
Insteekdok Solvay

Leg type
RL

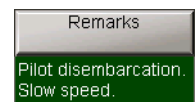
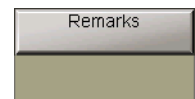
Leg type
RL
RL
GC

Leg type
GC

X PORT
X STBD
0.10
0.10 NM

X PORT
X STBD
0.12 NM
0.12


- edit XTD value to the right of the route leg; press the left trackball button;
- position the cursor on **Turn radius** element cell; double click the left trackball button to activate the cell;
- enter the radius for the arc of the suitable ship track on the turning circle; press the left trackball button.
- position the cursor on **Remarks** element cell; double click the left trackball button to activate the cell;
- enter the remark; press <Enter> key;
- position the cursor on **Safety contour** element cell; double click the left trackball button to activate the cell;
- edit safety contour value to the current route leg; press the left trackball button (by default, and also for all the routes created in the earlier versions, the 30 m value is set);
- position the cursor on **Safety depth** element cell; double click the left trackball button to activate the cell;
- edit safety depth value to the current route leg; press the left trackball button (by default, and also for all the routes created in the earlier versions, the 30 m value is set).

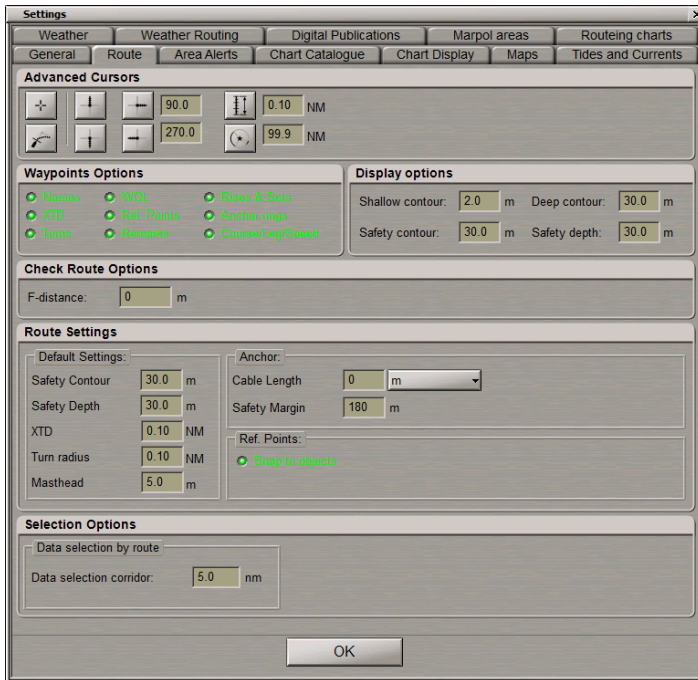


When filling in the table you can use the context menu called by the right trackball button:

- **Fill cells down** – to fill in all the cells below with a value entered in the selected cell;
- **Fill cells up** – to fill in all the cells above with a value entered in the selected cell.



Press the  button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Route** page.



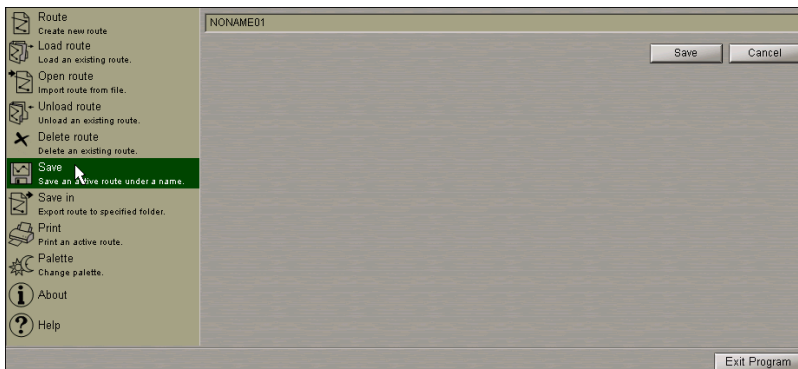
The following checkboxes in **Waypoints Options** group for turning on the display of Waypoint options on the Navi-Planner 4000 screen are checked by default:

- **Names** – to display of waypoints’ names on the Navi-Planner 4000 screen;
- **XTD** – to display on the electronic chart safety lines for the active route;
- **Turns** – to display on the electronic chart the turn radius arc for the active route;
- **WOL** - to display on the electronic chart the Wheel Over Line marks;
- **Ref. points.** – to display Reference points;
- **Remarks** - to display remarks for route legs;
- **Rises&Sets** - to display sun and moon rises and sets symbols;
- **Anchor rings** - to display anchor rings;
- **Course/Leg/Speed** - .to display course, distance and speed for each route leg.

Enter its name in the name input field in the top part of the screen.



To save the route, press the  and select **Save** item from drop-down menu.



A similar result can be obtained by using the Ribbon. Press the **Save** button in the right side of the Ribbon.



# Advanced Intelligent Routing

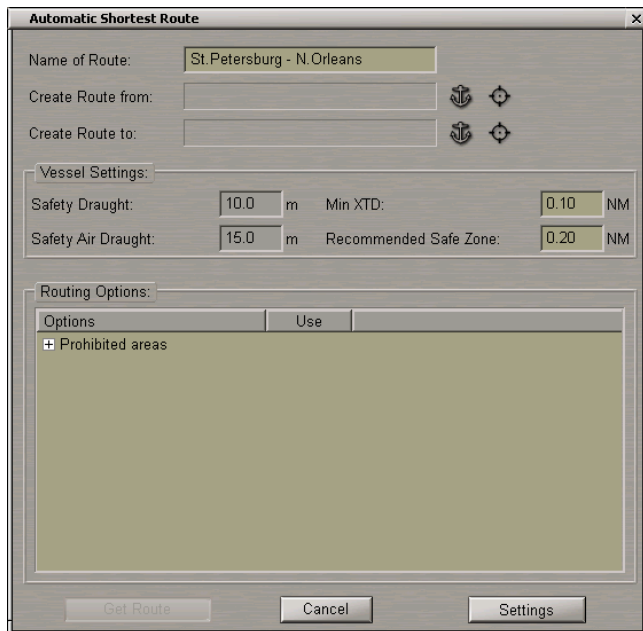
**ATTENTION!** The Advanced Intelligent Routing is not possible unless this option is additionally licensed.

By using the Advanced Intelligent Routing service, you can automatically create the shortest route geometry (taking into account the ship dimensions, draught) point-to-point, port-to-port.


In the left part of the Ribbon, press the **Auto route**.

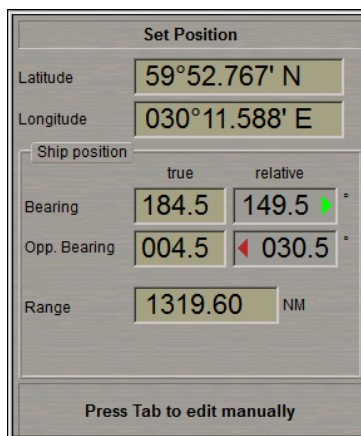


The **Request Route** window will open up.

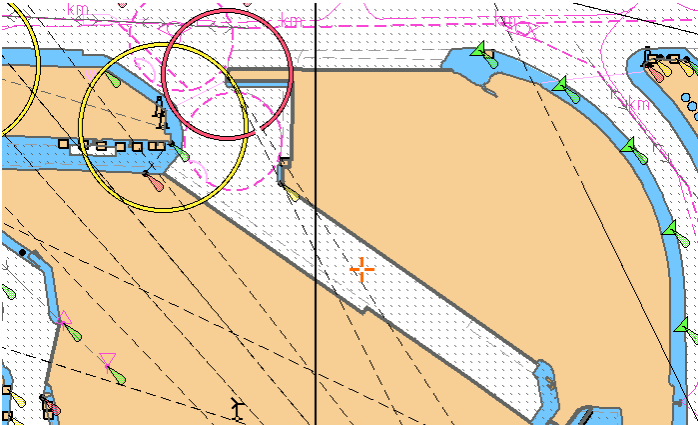


In the **Name of Route** input box, enter the route name.


Press the  button in the **Create Route from** row.

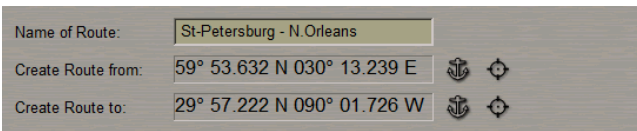


A graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display the cursor information window.




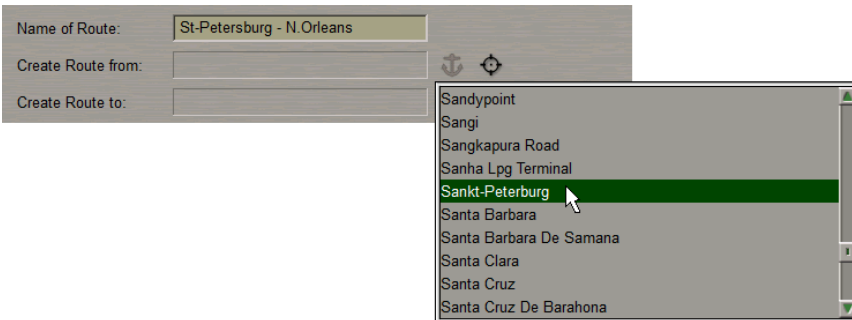
Use the graphic cursor to set on the Chart panel the initial point of the route to be plotted. Press the left trackball button to exit from the graphic cursor mode.

Use a similar procedure to set the end point of the route to be plotted by using the  button in the **Create Route to** row.

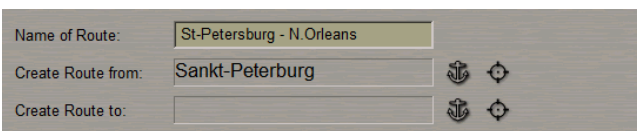



The coordinates of the route start and end points are displayed in the window in the **Create Route from** and **Create Route to** rows.

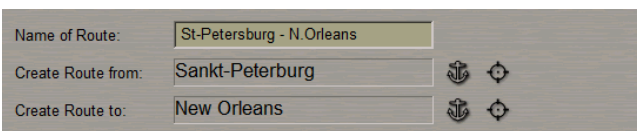
It is possible to use another method of selecting the route start and end points. To select the route start point, in the **Create Route from** row press the  button.



From the drop-down list, select the port of departure.



Use a similar procedure to set the end point of the route to be plotted by using the  button in the **Create Route to** row.

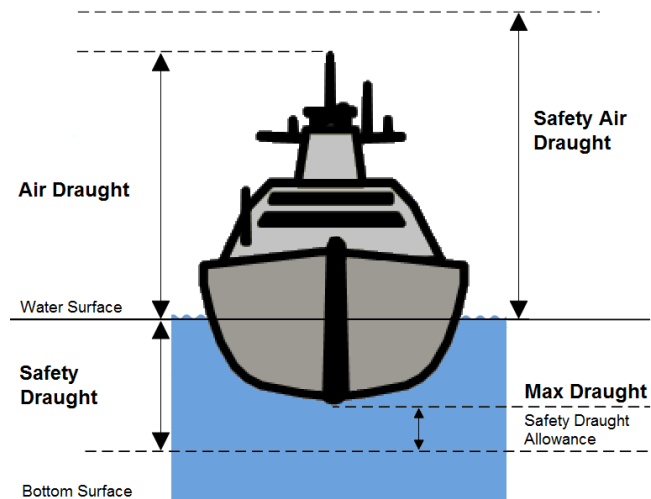


Names of the port of departure and port of arrival are displayed in the window in the **Create Route from** and **Create Route to** rows.

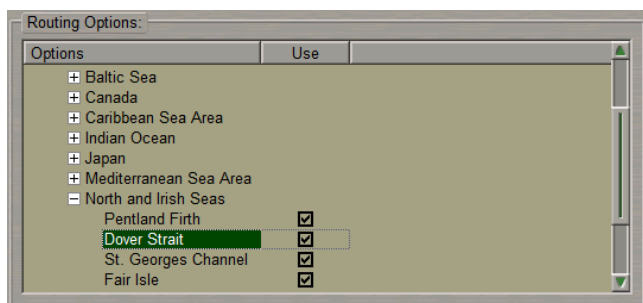


In the **Vessel Settings** group, enter the ship parameters that will be used in the route plotting:

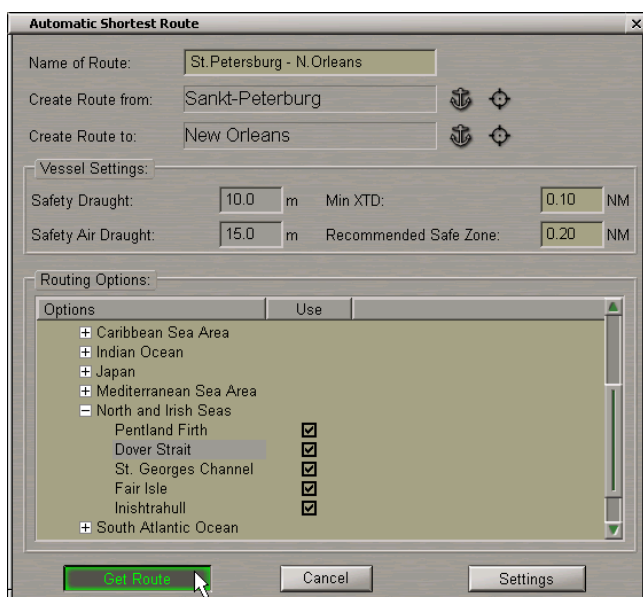
- **Safety Draught** – operator-set vessel safety draught;
- **Safety Air Draught** – distance from the water surface to the highest point on the mast;
- **Min XTD** – minimum safety zone on both sides of route legs;
- **Recommended Safe Zone** – recommended safety zone on both sides of route legs.



The **Routing Options** window displays a list of Routing Points (channels capes, straits, etc.) that will be used for plotting the route.

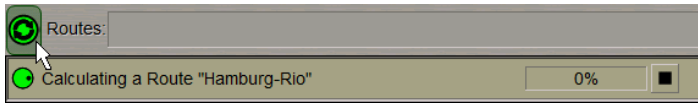



They are all marked as used for route plotting (checked checkboxes next to their names). If these points should be avoided, uncheck checkboxes next to their names.




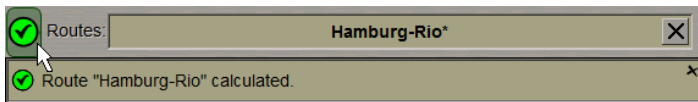
After making all the settings, press the enabled **Get Route** button to send the request. The Transas Advanced Intelligent Routing service will be used for the route plotting.

In the top left part of the screen, the  button will appear.



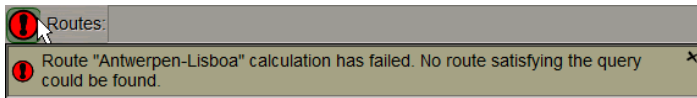
Press on this button. The window which will open displays the route plotting process which you can stop by pressing the  button.

After the route plotting is completed, the button in the top left part of the screen will look as follows: .

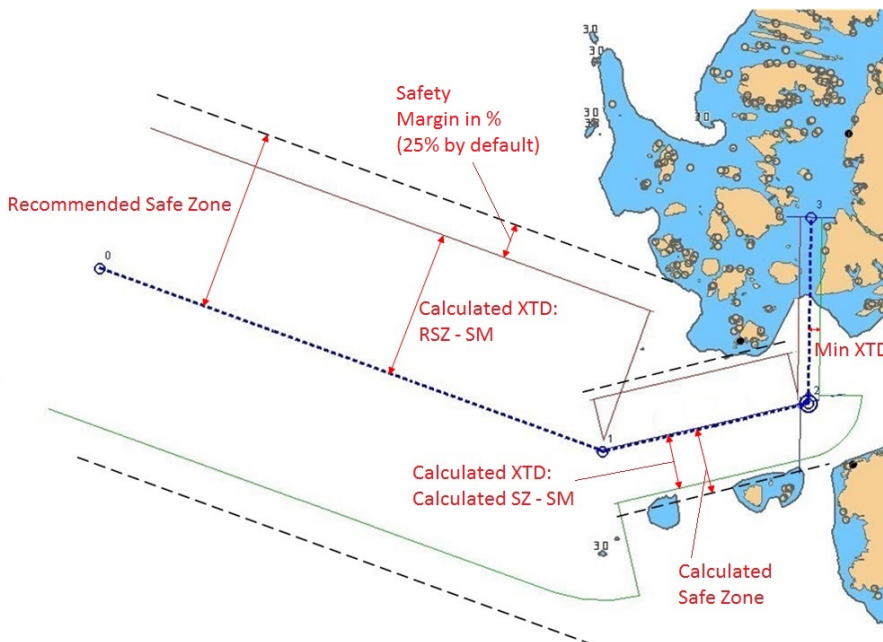


The order processing can have the following status:

- Calculating route "XXX".
- Route "XXX" calculation has failed.



When plotting the route, the service will use algorithms that are explained in the figure below:



1. The service always tries to plot a route so that the distance to dangers is always equal to the user-specified **Recommended Safe Zone**. In this case, the XTD value is calculated from the following formula:

$$\text{XTD} = \text{Recommended Safe Zone} - \text{Safety Margin},$$

In the current software implementation, the Safety Margin = 0.25Recommended Safe Zone

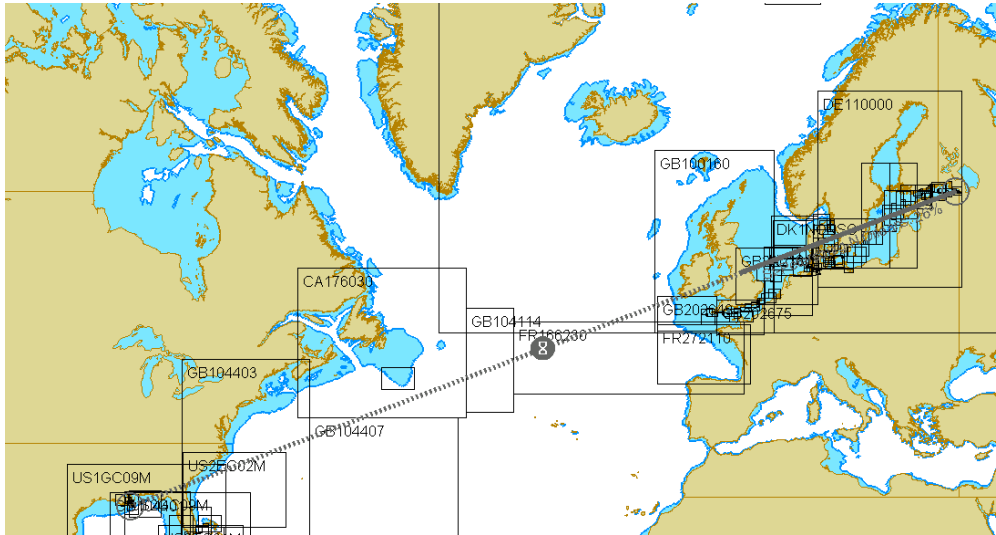
2. If the distance between dangers does not permit the **Recommended Safe Zone** to be maintained, the route will be plotted so that it will circumvent the danger at the maximum possible distance (Calculated Safe Zone), but not closer than the **Min XTD**; the XTD is calculated in much the same way as the Calculated XTD:

$$\text{XTD} = \text{Calculated Safe Zone} - \text{Safety Margin}$$

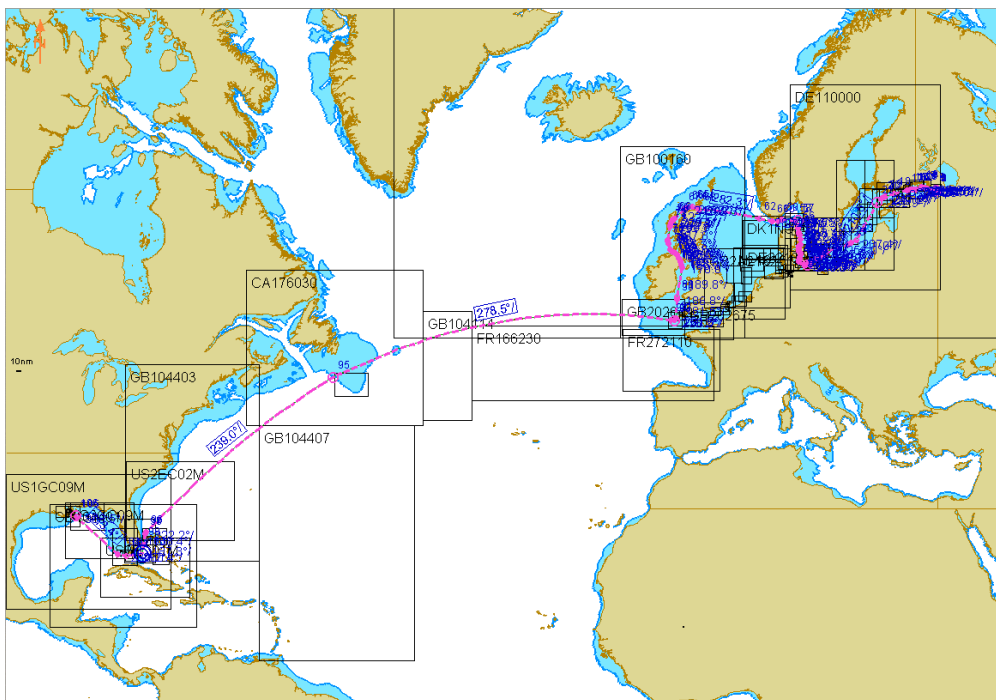
- If the distance between dangers does not permit the **Min XTD** to be maintained, the route will nonetheless be plotted; the XTD value will be equal to the **Min XTD**.

**XTD = Min XTD**

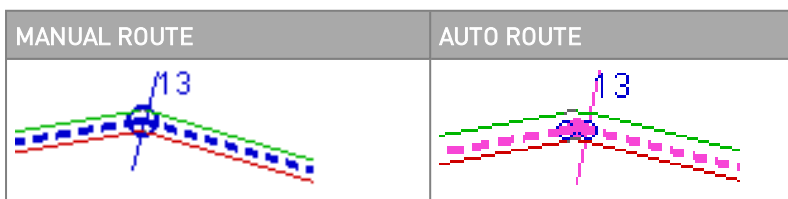
When the route is plotted on the chart panel, the route end points are connected with a straight dashed line with an hour glass symbol in the middle. As the plotting proceeds, the line grows solid



After the route route creation, it will be displayed on the screen.

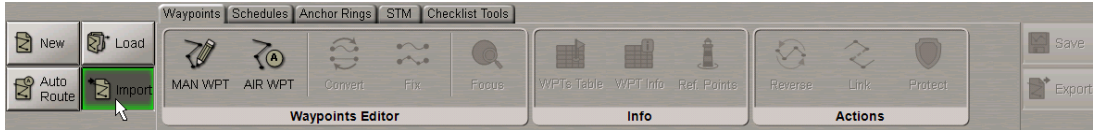


The plotted route is shown in pink. The display of WPT's is also different from WPT's in a manually plotted route:

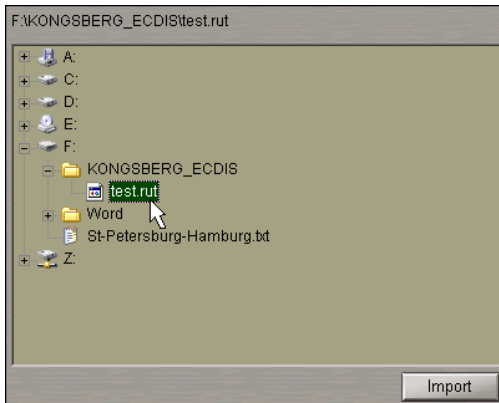


## Route Importing

Press the **Import** button in the left side of the Ribbon.



Browse the folder where the route is stored and select it.



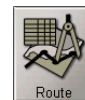
Press **Import** button. The route will be imported.

There are routes of the following formats, which may be imported:

- Transas (\*.rt3);
- Transas exchange (\*.rt4);
- Route exchange (\*.rt4);
- Route exchange (\*.rtz);
- Bon Voyage System (\*.rtzp);
- Furuno (\*.txt);
- JRC (\*.csv);
- Hagenuk (\*.txt);
- CMapECS (\*.route);
- Sperry (\*.vp);
- Kongsberg (\*.rut);
- MARIS v3 (\*.rou);
- MARIS v4 (\*.rtu);
- NobeltecAdmiral (\*.txt);
- ENavigator (\*.rtx);
- KML (\*.kml);
- KMZ (\*.kmz);
- GPX (\*.gpx);
- SAM CHARTPILOT 1106 (\*.sam);
- SAM Electronics (\*.xml);
- ENSI (\*.xml);
- Jeppesen (\*.route);
- OSI (\*.rte);
- Excel (\*.html);
- HTML (\*.html);
- PDF (\*.pdf).

# Route Loading and Unloading

Press the button in the Task Selection Area to switch to the **Route** task.



Press the  Transas button and select **Load route** item from the drop-down menu.



The right-hand part of the drop-down menu will display a list of all the routes available for loading.



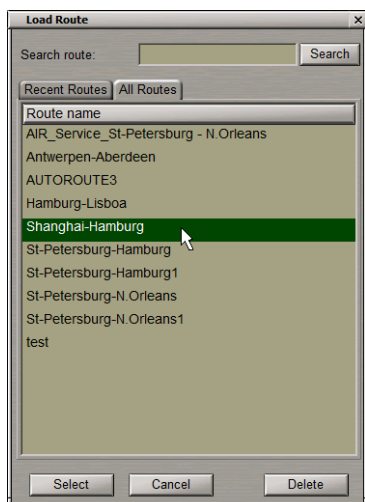
In the list, select the route required to be loaded in the editing mode, and press the left trackball button.

A similar result can be obtained by using the Ribbon. Press the **Load** button in the left side of the Ribbon.



In the **Load Route** window which will open, the **Recent Routes** tab presents the last viewed routes on the Chart Panel, the **All Routes** tab lists all the routes in the internal database.

Go to the necessary **Recent Routes** or **All Routes** tab.

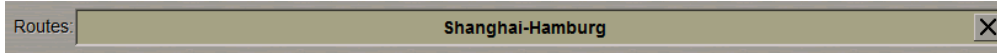




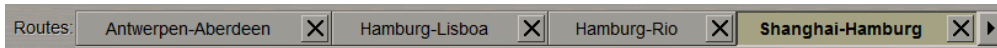
In the list, select the route required to be loaded in the editing mode.

To search for a route by its name, enter the first characters of the route name in the **Search route** line and press the **Search** button.


Press the **Select** button. The selected route will be loaded.

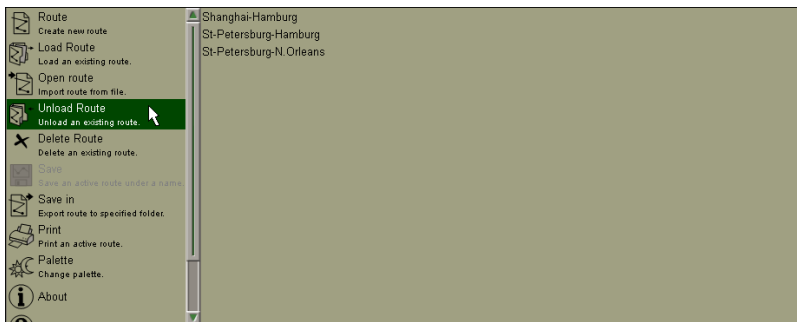


Several routes can be loaded simultaneously in the editing mode. As a button with the route name is pressed, the route becomes active and can be edited on the screen by using the graphic editor. The loaded route can be selected in the **Routes** group, which is above the Ribbon:

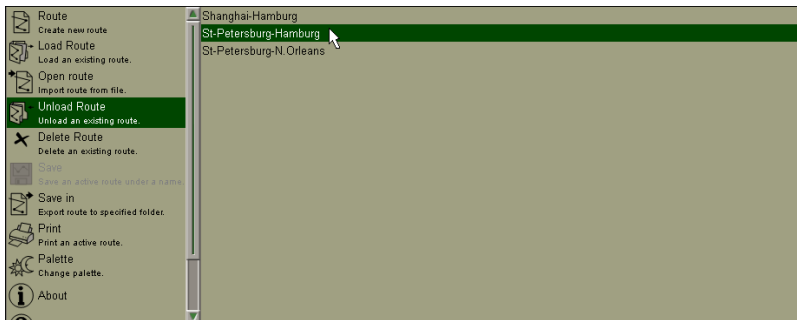


For switching between the routes use the   buttons placed along the route name edges.

To unload the route, press the  Transas button and select **Unload route** item from the drop-down menu.

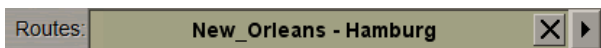


The right-hand part of the drop-down menu will display the list of all the loaded routes



In the list, select the route required to be unloaded, and press the left trackball button.

A similar result can be obtained by pressing the  button placed to the right of the route name in the **Routes** group, which is above the Ribbon:



# Fast Route Search

Press the button in the Task Selection Area to switch to the **Route** task.

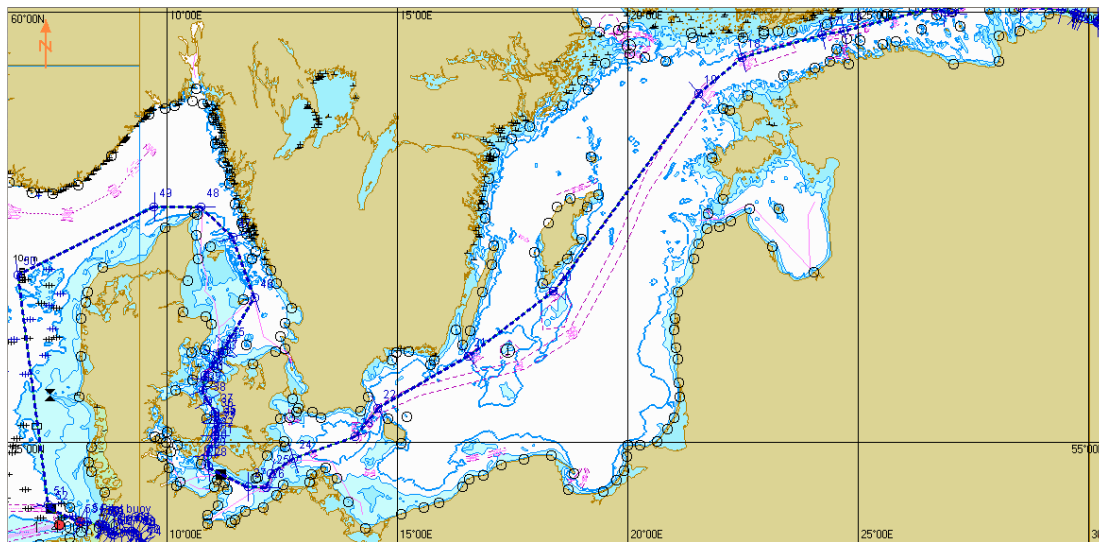


Load the necessary route (see previous section).

In the Ribbon switch to **Waypoints** tab. Press **Focus** button in **Waypoints Editor** group.



The Chart Panel will display the entire route on the suitable scale chart.



# Route Editor

The route can be edited in two modes: Manual (MAN) and Auto Routing (AR).

In the manual mode, the user plots (changes) the route's rectilinear legs between two points. As this is done, all the dangers to navigation within the XTD limits on these legs can only be determined by using the Route Checking functionality (see *Chapter 3, section Voyage Checking and Editing Route Taking into Account Dangers to Navigation*). You can then edit the route to avoid them.

The automatic route editing mode (Auto Routing) permits the user to automatically plot the route between any two points on the chart. The AIR service automatically creates the shortest route geometry (taking into account the ship dimensions and draught). In this case, the route will be plotted so as to avoid all the dangers to navigation, take into account traffic separation schemes, etc.

The route legs and points plotted and edited in the Auto Routing mode are shown in pink on the chart panel, whereas the route legs and points plotted manually are shown in blue (see section *Creating Route, paragraph Advanced Intelligent Routing*).

Press the button in the Task Selection Area to switch to the **Route** task.



## Manual Graphic Route Editing

Load the necessary route (see *Route Loading and Unloading* section).

In the Ribbon, switch to the **Waypoints** tab. Press the **MAN WPT** button in the **Waypoints Editor** group.



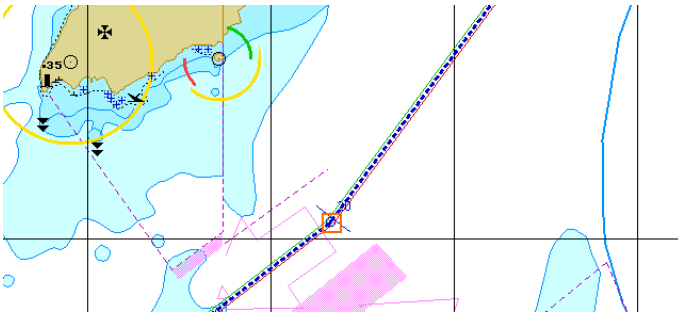
An acquisition marker will appear in the Chart Panel, whereas the right bottom part of the screen will display the **Edit route** information window.

Edit route	
Latitude	56°02.194' N
Longitude	018°51.534' E
Ship position	
	<input type="checkbox"/> true <input type="checkbox"/> relative
Bearing	191.8    156.8 <span style="color: green;">▶</span>
Opp. Bearing	011.8    ◀ 023.2
Range	1580.16 NM
Press Tab to edit manually	

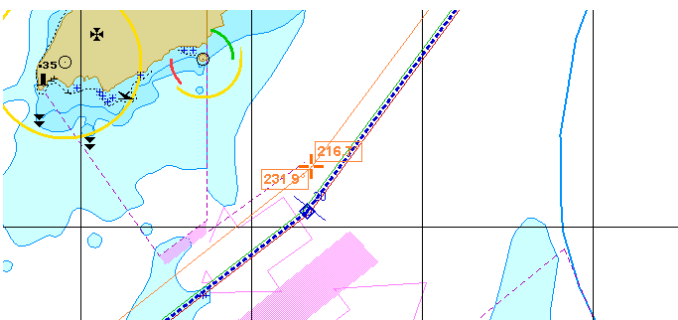
The **Edit route** window displays marker coordinates.

## Changing Coordinates of an Existing WPT

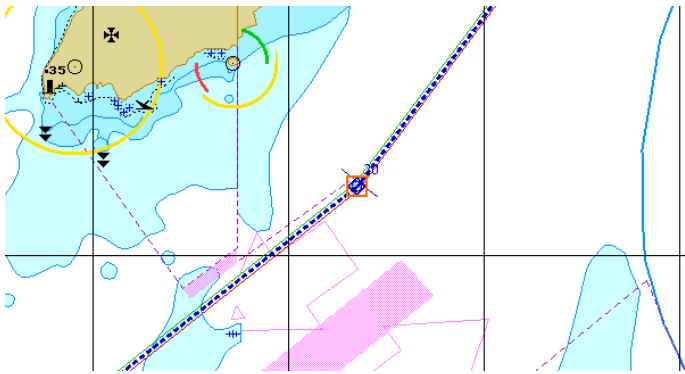
Position the acquisition marker on the WPT to be edited.



Press the left trackball button: the marker will acquire the WPT and change its own form.



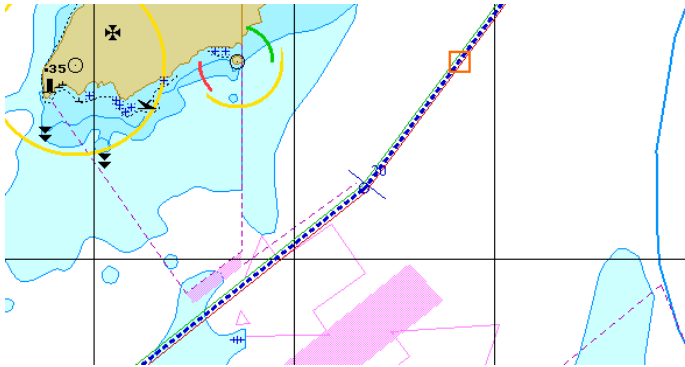
Move the acquired WPT to the required place. As the WPT coordinates change, the adjacent route legs will change, too. Press the left trackball button.



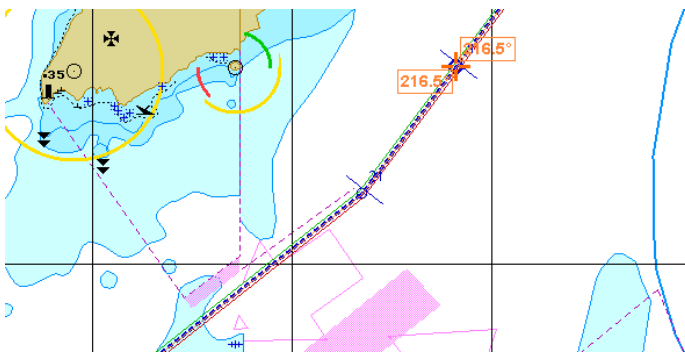
The WPT will be set in the new coordinates.

## Setting a New WPT

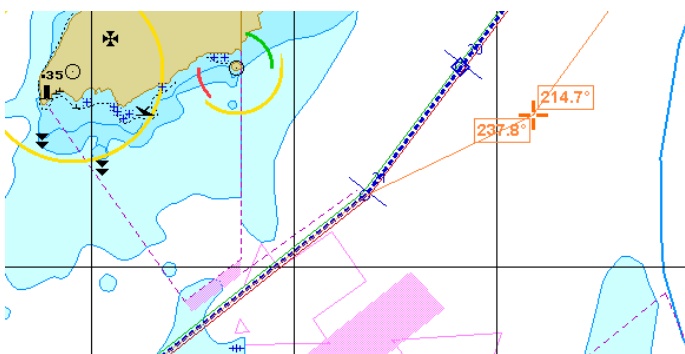
Position the acquisition marker on the route leg where a new WPT is required to be set.



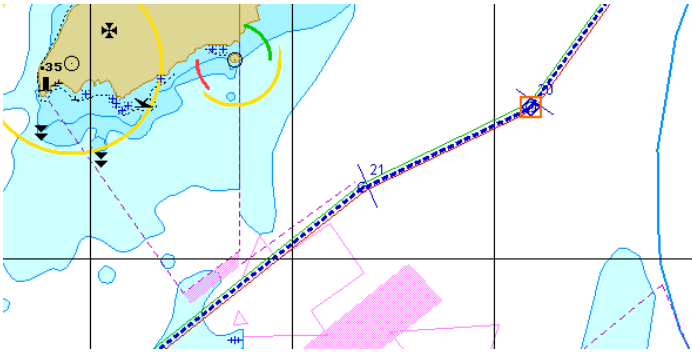
Press the left trackball button: a new WPT will be set. The marker will acquire the new WPT and change its own form.



Move the acquired WPT to the necessary place.

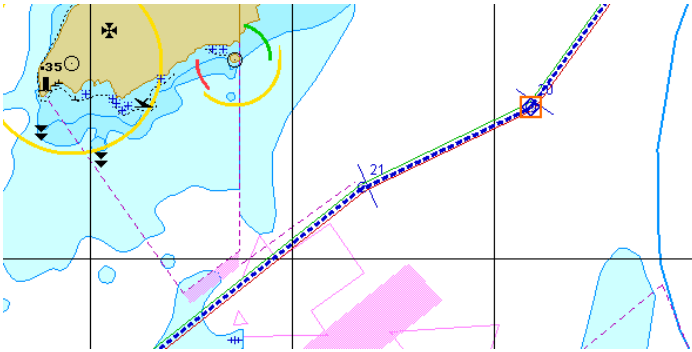


As the WPT coordinates change, the adjacent route legs will change, too. Press the left trackball button. The new WPT will be set in the specified coordinates.

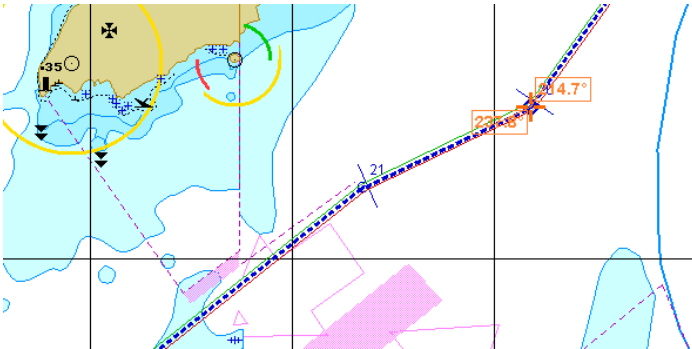


## Deleting a WPT

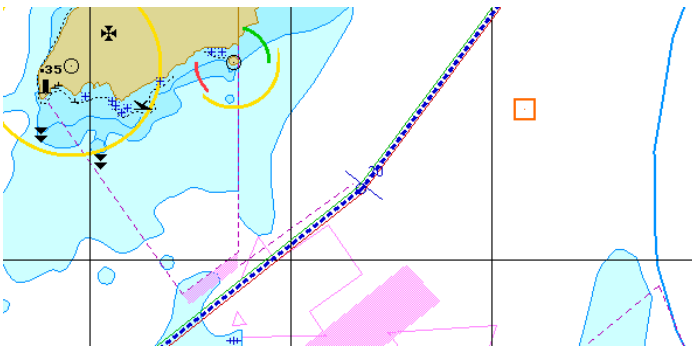
Position the acquisition marker on the WPT to be deleted.



Press the left trackball button: the marker will acquire the WPT and change its own form.



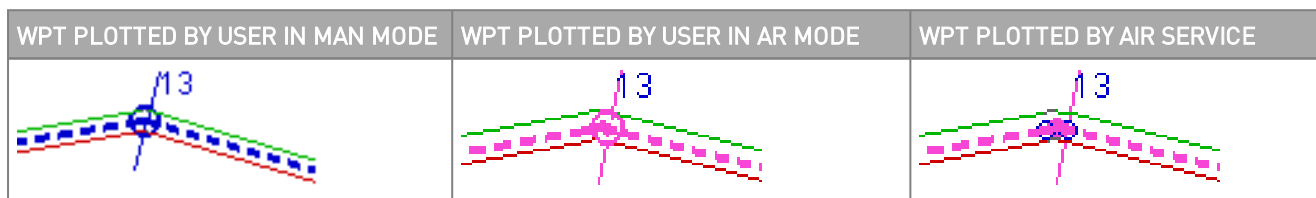
Press the right trackball button. The point will be deleted, and the adjacent route legs will merge to form one.



Press the right trackball button to exit from the editing mode. The marker will assume the shape of the free cursor. Save the route as required (see *Creating a Route* section).

## Automatic Graphic Route Editing

With the AR route editing, if there is a danger to navigation on a leg between two user-specified WPT's, the leg is split into several ones in order to circumvent this danger. As this is done, the AIR service principles are used (see section *Creating a Route*, paragraph *Advanced Intelligent Routing*). In this case, automatic WPT's are created. Waypoints set by the user manually (MAN WPT) and plotted by the AIR service (AR WPT) are displayed differently:



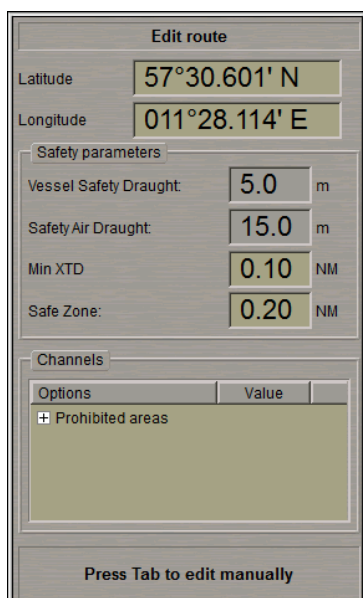
The behaviour of these points during the editing differs accordingly (see the description below).

Load the necessary route (see *Route Loading and Unloading* section).

In the Ribbon, switch to the **Waypoints** tab. Press the **AR WPT** button in **Waypoints Editor** group.



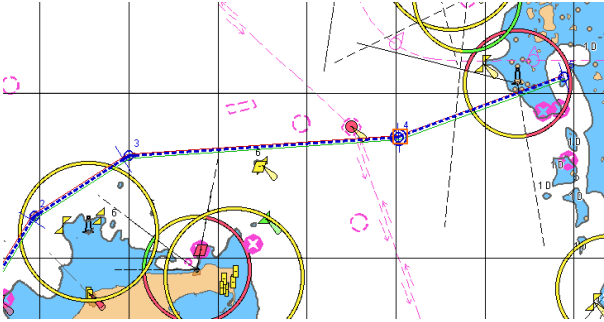
An acquisition marker will appear in the Chart Panel, whereas the right bottom part of the screen will display the **Edit route** information window.



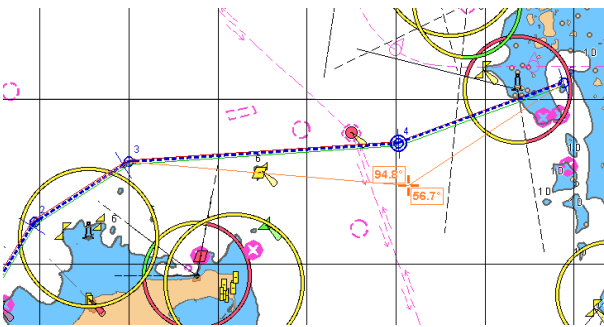
The **Edit route** window displays the marker coordinates, ship parameters and Routing Points that will be used in the leg plotting (see section *Creating a Route*, paragraph *Advanced Intelligent Routing*). To switch between the graphic cursor control on the NPL screen and input boxes in the **Edit route** information window, use the <Tab> keyboard key.

## Changing Coordinates of an Existing WPT

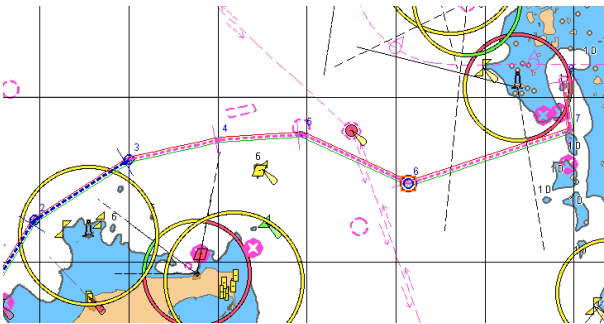
Position the acquisition marker on the WPT to be edited.



Press the left trackball button: the marker will acquire the WPT and change its own form.

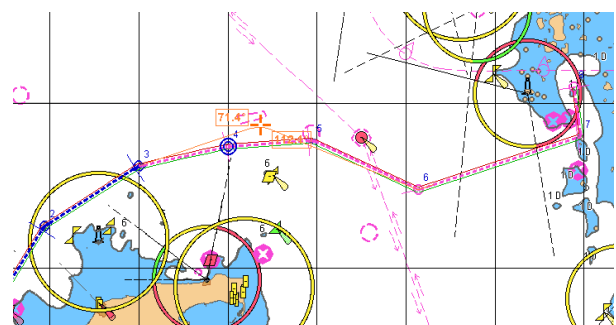
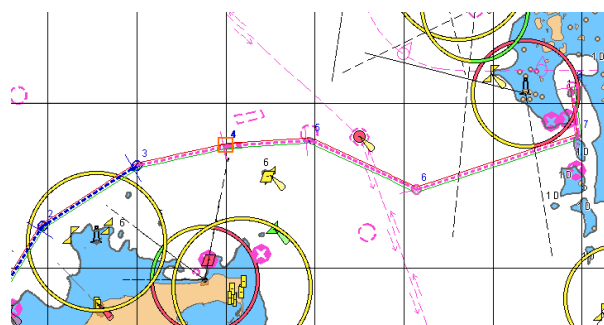


Move the acquired WPT to the required place. As the WPT coordinates change, the adjacent route legs will change, too. In this example, WPT3-WPT4 and WPT4-WPT5 legs cross dangers to navigation. Press the left trackball button.

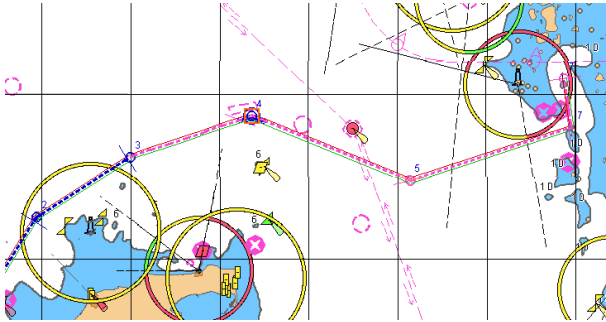


The WPT will be set in the new coordinates. AR WPT's (4,5) have been added; MAN WPT (used to be 4 but became 6) remains where it was set by the user, AR WPT (7) has been added. As the result, the route was plotted so as to avoid dangers.

Should the user decide to change an AR WPT position, he/she can move the selected AR WPT.



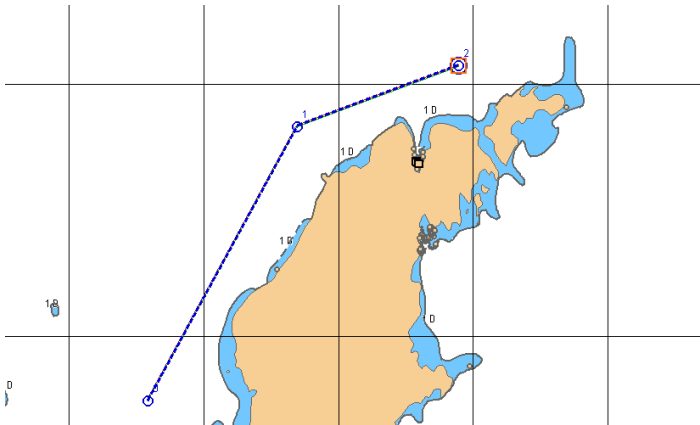
After this step, the AR WPT will become MAN WPT (4). As the MAN WPT is moved to a new position, the new automatic re-calculations will be run from the first previously created AR WPT (4) to the last one (6).



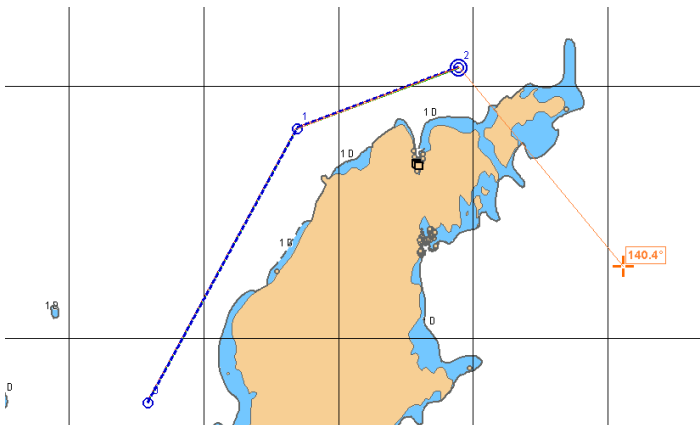
Since we have MAN WPT (4), a new automatic route will be plotted through this WPT.

## Setting a New WPT

Position the acquisition marker on the route leg or on the WPT after which a new WPT should be added, and press the left trackball button.



Position the acquisition marker on the route leg where a new WPT is required to be set.



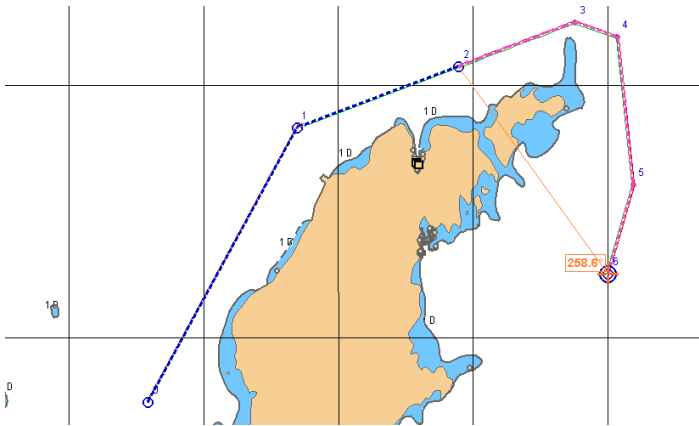


Press the left trackball button: a new WPT will be set.

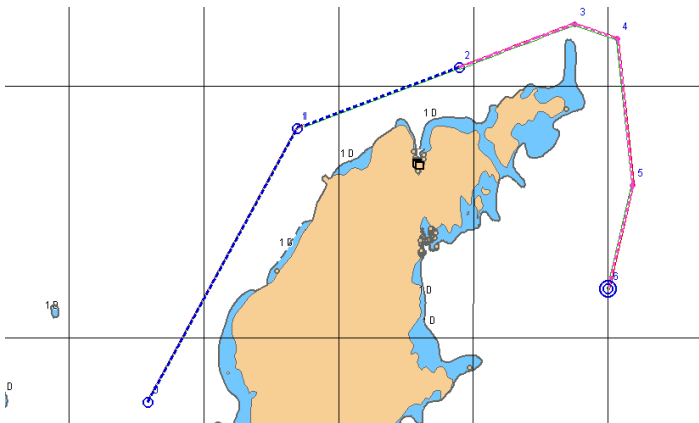




After the addition of new WPT (3), a query will be sent to the AIR service.

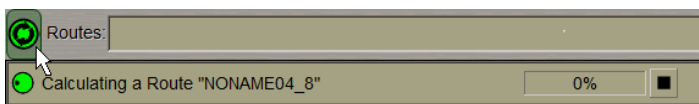
Upon receipt of a reply from the AIR service, new legs will be plotted including the user-specified MAN WPT (used to be 3 but became 6) so as to avoid dangers.





As this is done, new AR WPT (3,4,5) will be plotted. Press the left trackball button and continue the plotting in the same manner, or press the right trackball button to end the route planning.

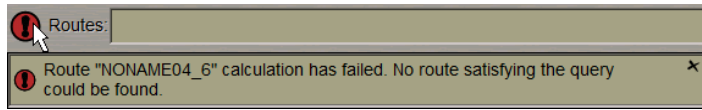


During the route plotting up to the user-specified MAN WPT, in the top left part of the screen the  button will appear. To view the route plotting process, double right-click to exit from the plotting mode, then press the  button.



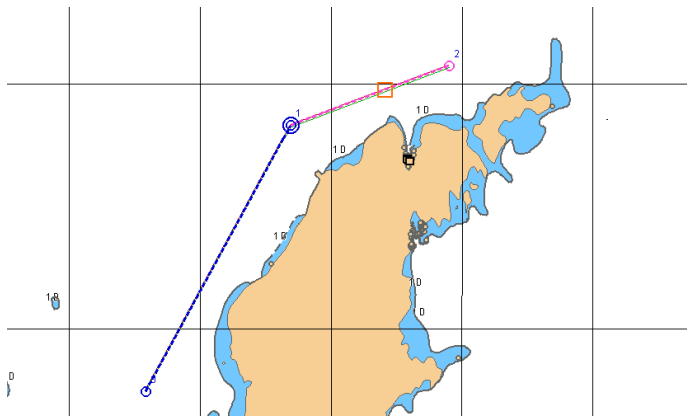
The window which will open displays the route plotting process which you can stop by pressing the  button.

If there has been a failure during the plotting, the button will acquire the form of . Press the button to find out what caused the plotting failure.

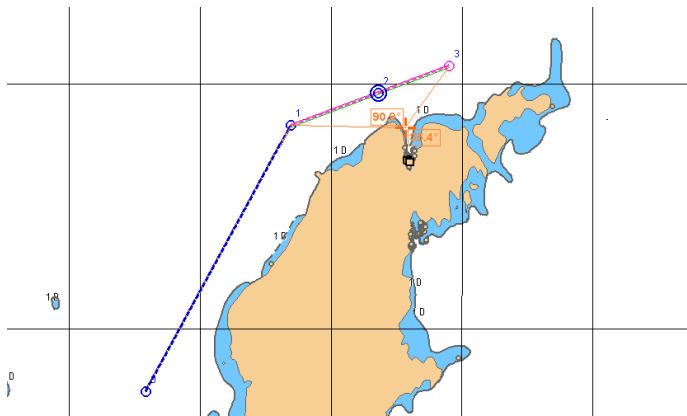


NOTE: For a new WPT to be inserted in an existing leg with the aid of the AIR WPT editor, this leg is required to be plotted by using the AIR WPT editor. Otherwise a MAN WPT will be added (see the previous paragraph).

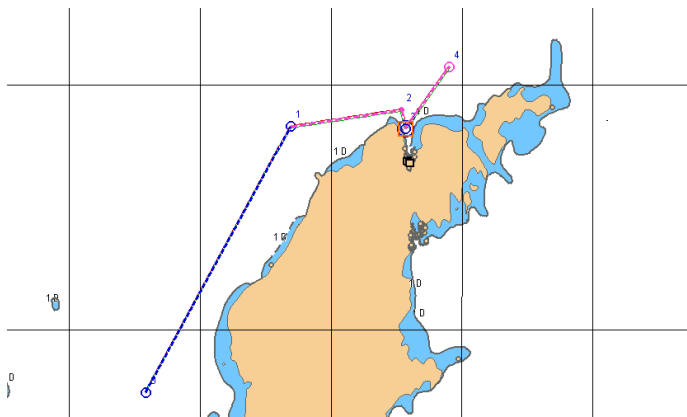
Position the acquisition marker on the route leg where a new WPT is required to be set.



The marker will acquire the new WPT and change its own form. A MAN WPT will be automatically set in this position. Move the acquired WPT to the necessary place.



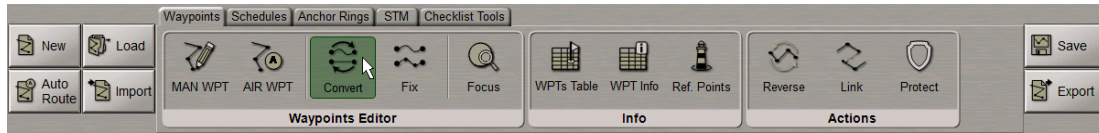
As the WPT coordinates change, the adjacent route legs will change, too. Press the left trackball button. The new WPT will be set in the specified coordinates. In this case, the AIR service will re-compute all the legs from the previous MAN WPT (1) to the WPT (3) which is being set, and from this waypoint to the next MAN WPT (4).



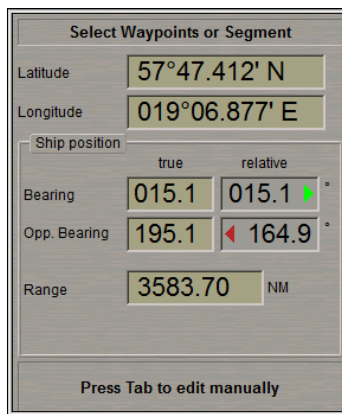


## Converting WPT

For the user convenience sake, legs can be converted from the manually plotted ones to those plotted in the automatic mode and the other way round. To this end, in the Ribbon, switch to the **Waypoints** tab. Press the **Convert** button in the **Waypoints Editor** group.

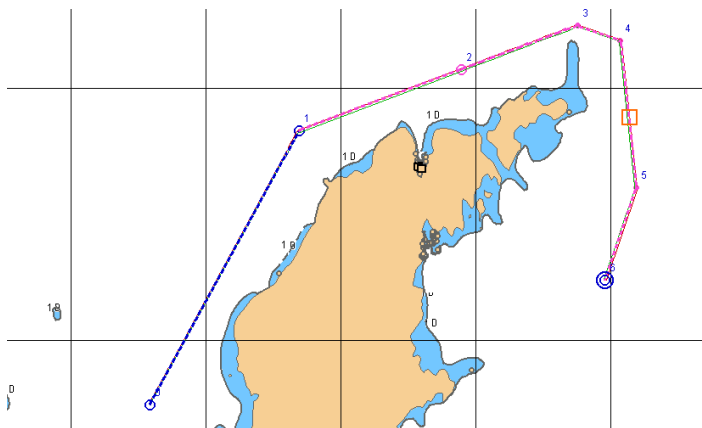


An acquisition marker will appear in the Chart Panel, whereas the right bottom part of the screen will display the **Select Waypoint or Segment** information window.

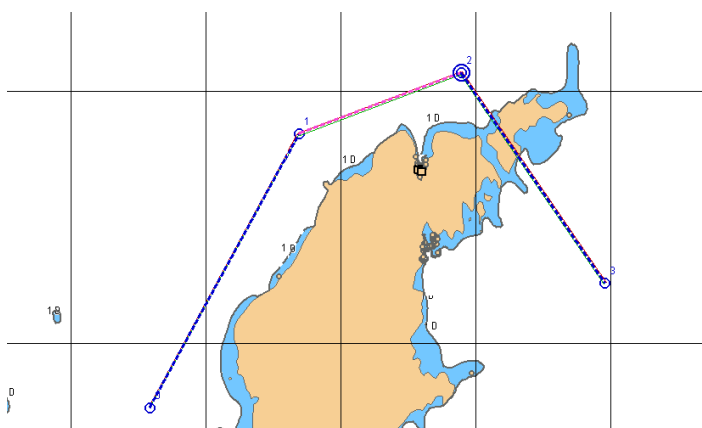


This window displays the marker coordinates.

Position the acquisition marker on the WPT or route leg to be converted.

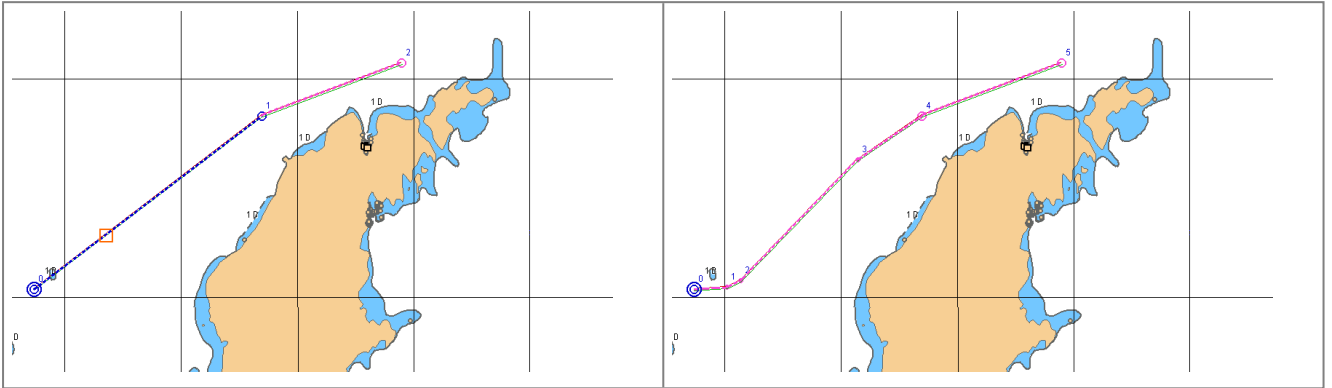


Press the left trackball button.



The leg automatically plotted between two MAN WPT's will be re-plotted according to the manual editor rules, i.e., these points will be connected with a straight line.

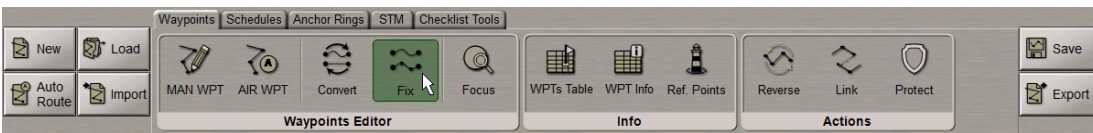
If a leg plotted in the manual mode between two MAN WPT's should be converted, it will be re-plotted between these WPT's in the automatic mode, dangers taken into account:



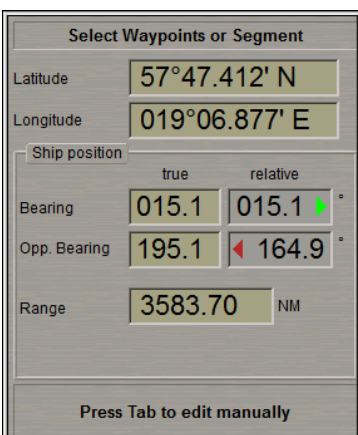
### Fixing WPTs

After the route has been plotted and edited, it may include both manually and automatically plotted legs. It is recommended that for the subsequent use legs plotted in the automatic mode should be fixed. In this case, all the AR WPT's will be converted to MAN WPT's. Otherwise, during the voyage fine tuning automatic AR WPT will be reset, and the route plan will have to be checked anew, especially if the automatic mode is used for plotting legs at a large distance.

To do this, in the Ribbon switch to the **Waypoints** tab. Press the **Fix** button in **Waypoints Editor** group.

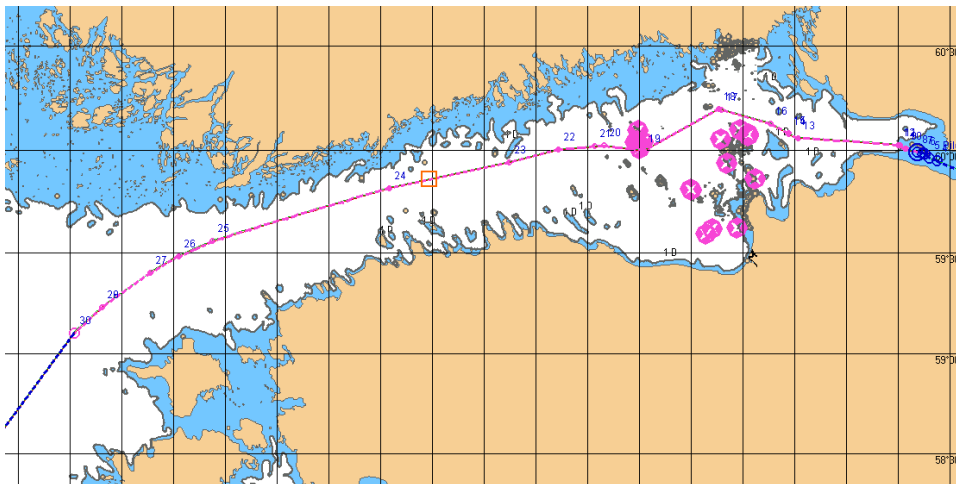


An acquisition marker will appear in the Chart Panel, whereas the right bottom part of the screen will display the **Select Waypoint or Segment** information window.

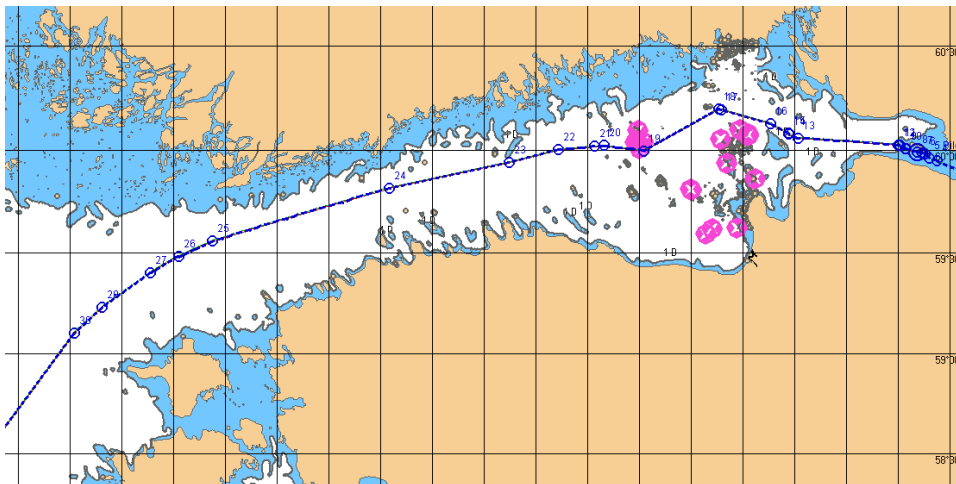


This window displays the marker coordinates.

Position the acquisition marker on the route leg required to be fixed.



Press the left trackball button.



All the AR WPT's that were available in this segment between the two closest MAN WPT's will be converted to MAN WPT's.

## Tabular Route Editing

Load the necessary route (see *Route Loading and Unloading* section).

In the Ribbon switch to **Waypoints** tab and press **WPTs Table** button in **Info** group.



The bottom part of the screen will display the corresponding table.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0		59° 53.635 N 030° 13.243 E	XX	XXXX XXXX	XXXX	XXXX XXXX	XXXX		XXX.X	XXX.X	XXX.X	XXX.X	XXX.X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
5		59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined

Edit the existing route by using the following procedures:

- position the cursor on **Name** element cell; double click the left trackball button to activate the cell;
- enter the WPT name; press <Enter> key;
- position the cursor on **Position** element cell. Double click the left trackball button to activate the cell;
- enter the latitude and longitude coordinates and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **Leg type** element cell; double click the left trackball button to activate the cell;
- press the button in the right-hand part of the cell and select the sailing type from the list which will open up;
- press the left trackball button to confirm the changes you have made;
- position the cursor on **X PORT/X STBD** element cell; double click the left trackball button to activate the cell;
- edit XTD value to the left of the route leg; press the left trackball button;
- edit XTD value to the right of the route leg; press the left trackball button;
- position the cursor on **Turn radius** element cell; double click the left trackball button to activate the cell;
- enter the radius for the arc of the suitable ship track on the turning circle; press the left trackball button.

Name

Name
St-Petersburg, berth N42

Position
59°53.635' N
030°13.243' E

Position
59°53.665' N
030°13.243' E
Apply
Cancel

Position
59° 53.665' N
030° 13.243' E

Leg type
RL

Leg type
RL ▾
RL
GC

Leg type
GC

X PORT
X STBD
0.10
0.10 NM

X PORT
X STBD
0.12 NM
0.12

X PORT
X STBD
0.12 NM
0.12 NM

Turn radius
0.10

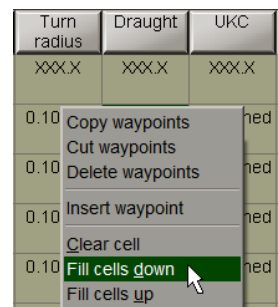
Turn radius
1.00 NM

- position the cursor on **Remarks** element cell; double click the left trackball button to activate the cell;
- enter the remark; press <Enter> key;
- position the cursor on **Safety contour** element cell; double click the left trackball button to activate the cell;
- edit safety contour value to the current route leg; press the left trackball button (by default, and also for all the routes created in the earlier versions, the 30 m value is set);
- position the cursor on **Safety depth** element cell; double click the left trackball button to activate the cell;
- edit safety depth value to the current route leg; press the left trackball button (by default, and also for all the routes created in the earlier versions, the 30 m value is set).



When filling in the table you can use the context menu called by the right trackball button:

- **Fill cells down** – to fill in all the cells below with a value entered in the selected cell;
- **Fill cells up** – to fill in all the cells above with a value entered in the selected cell.



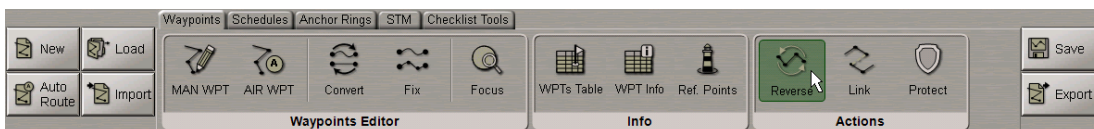
Edit other WPT's.

Save the route as required (see *Creating a Route* section).

## Creating Reverse Route

Load the necessary route (see *Route Loading and Unloading* section).

In the Ribbon switch to **Waypoints** tab. Press **Reverse** button in **Actions** group.



A route will be created with the WPT order inverse to that in the active route.

All the changes in the table will be shown accordingly on the Chart Panel.

Save the route as required (see *Creating a Route* section).



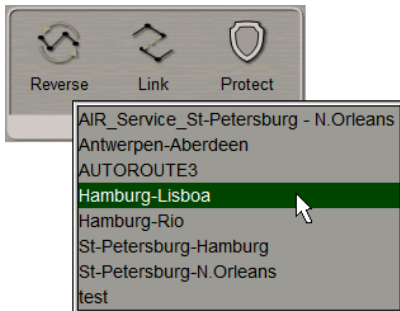
## Merging Routes

Load the necessary route (see *Route Loading and Unloading* section).

In the Ribbon switch to **Waypoints** tab. Press **Link** button in **Actions** group.



In the list, which will open up, select the route, which will be connected to the last point of the loaded route.




Press the left trackball button.

WPT's of the connected route will be added to the table of route elements. All the changes in the table will be shown accordingly on the Chart Panel.

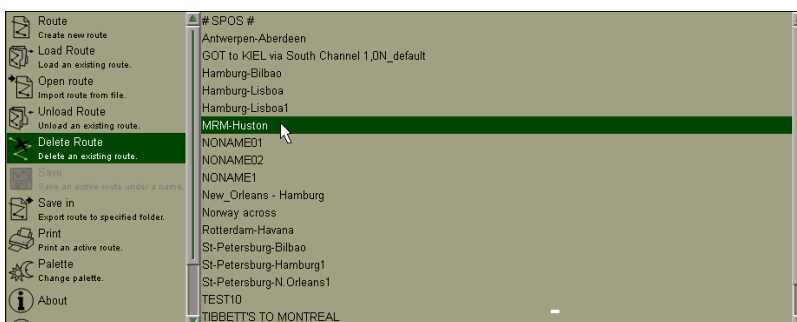
Save the route as required (see *Creating a Route* section).

## Deleting a Route

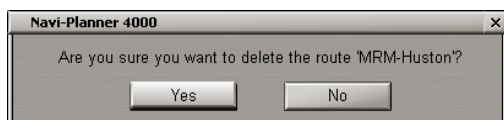
To delete the route, press the Transas button  and select **Delete route** item from the drop-down menu.



The right-hand part of the drop-down menu will display the list of all the loaded routes.



In the list select the route required to be deleted, and press the left trackball button.

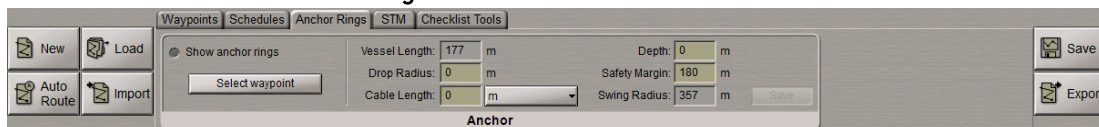


In the window, which will appear, confirm the deleting.

## Anchorage Planning

Plot the route by using one of the procedures described above, or load the plotted route (see section *Route Loading and Unloading*).

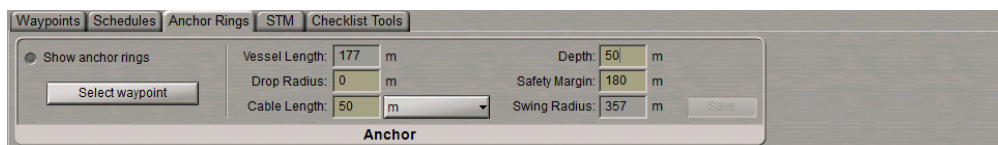
In the Ribbon switch to **Anchor Rings** tab.



During the route planning it is possible to set safe anchorage parameters in a selected WPT. To this end, the own ship length (Ship Length) specified in the System Configuration utility of the MFD software is used (see document *Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Installation Guide, Chapter 2, section MFD Configuration, paragraph MFD Settings*) along with the following parameters:

- Drop Radius – the “inner” circle radius within which the anchor may turn up during the dropping. The zero settings assumes that the anchor will get exactly in the WPT position;
- Cable Length - anchoring cable length, cannot be lower than the Depth value;
- Depth – estimated depth value in the anchoring position;
- Safety Margin – additional range to ensure safe anchorage, can be set to zero;
- Swing Radius – radius of the “outer” circle calculated from the following formula:

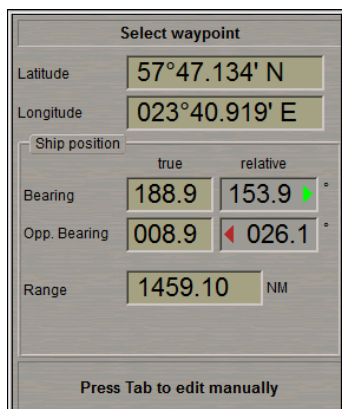
$$\text{SwingRadius} = \text{DropRadius} + \text{ShipLength} + \text{SafetyMargin} + \sqrt{\text{CableLength}^2 - \text{Depth}^2}$$



Use the **Anchor Rings** tab to set the necessary values for the parameters listed above. For the Cable Length you can use both, metres and shackles (the length of one shackle is equal to 27.5 m).

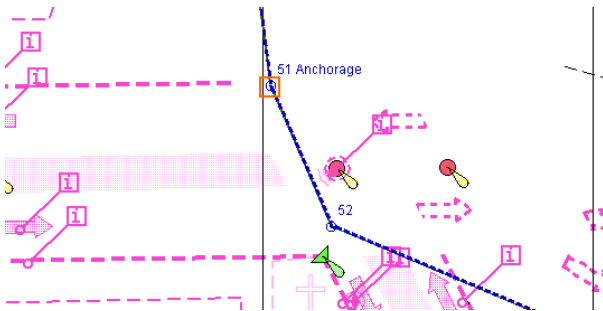
Press the **Select waypoint** button.

An acquisition marker will appear in the Chart Panel whereas the right bottom part of the screen will display the **Select waypoint** information window.

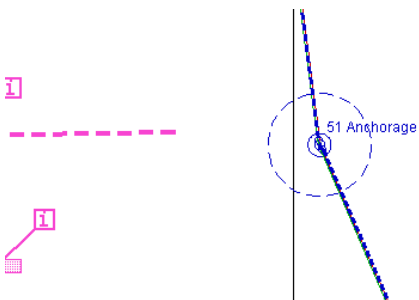


Select waypoint window displays marker coordinates.

Position the acquisition marker on the anchoring WPT:



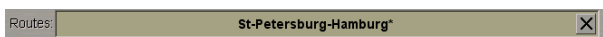
Press the left trackball button.



The Chart Panel will display the Drop Circle (a solid circle if set) and the Swing Circle (dashed circle).

NOTE: To this end, it is necessary to check the **Show Anchor rings** checkbox.

The settings made for the WPT in question will be entered in the route, its status will be changed to edited, and the "\*" symbol will be added to its name.



After the end of editing, the route should be saved.

NOTE: If some parameters have already been set for the selected WPT, they will be automatically restored in the **Anchor** tab. After changing, save them by pressing the **Save** button which will be enabled.

At the same time, the information will open up in the Chart panel:

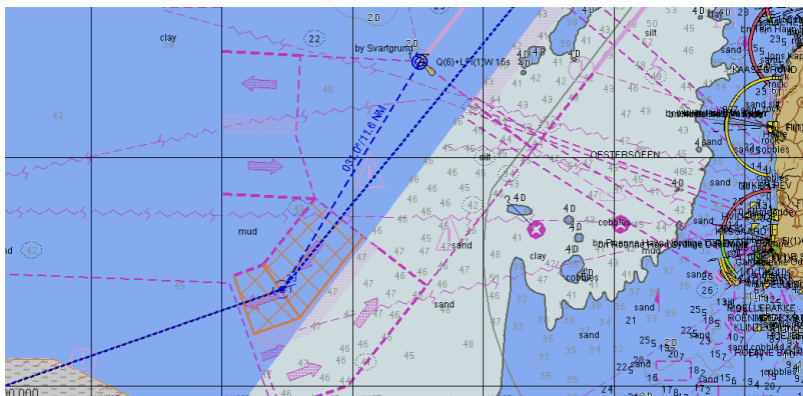


The window shows all the dangers which happen to be within the anchorage zone (Swing Circle).

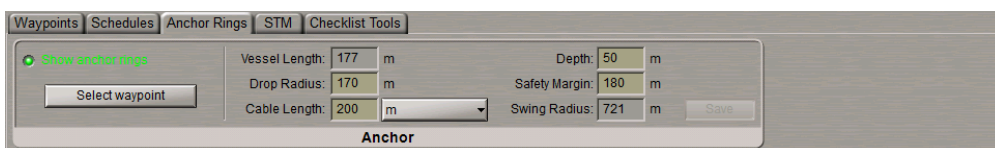
The following chart objects should be considered as dangerous during the anchorage:

- Obstructions, Wrecks, Underwater rocks, Isolated dangers, Nav Aids;
- Depth contours smaller than the ship's Safety Contour;
- All objects with the "Anchorage Restricted" and "Anchorage Prohibited" attributes;
- New objects (NEWOBJ) containing dangerous object references.

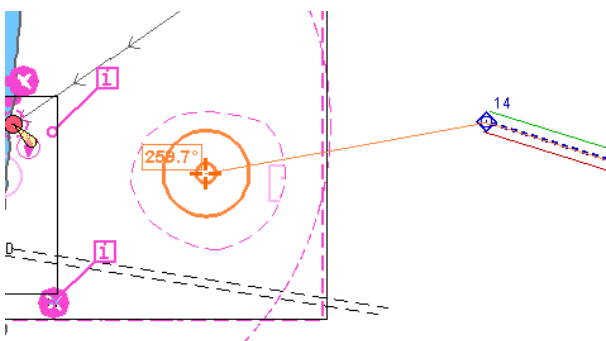
Click on the dangerous object name: it will be highlighted in orange on the Chart Panel:



For the user convenience sake, the graphic route plotting mode implements the display of a Drop Circle and Swing Circle on the Chart panel. To this end, check the **Show anchor rings** checkbox in the **Anchor** group:



Enter the route graphic editor mode (see section *Creating Route*, paragraph *Plotting Route*).

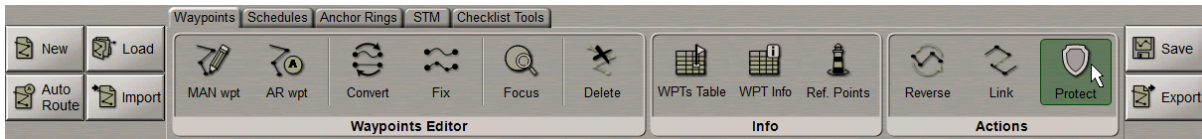


During the route plotting, the Drop Circle and Swing Circle will be shown on the Chart Panel in the form of solid circles.

## Protecting Route from Editing

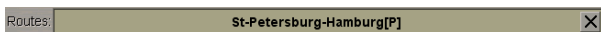
Plot the route by using one of the procedures described above, or load the plotted route (see section *Route Loading and Unloading*).

In the Ribbon switch to **Waypoints** tab. Press **Protect** button in **Actions** group.

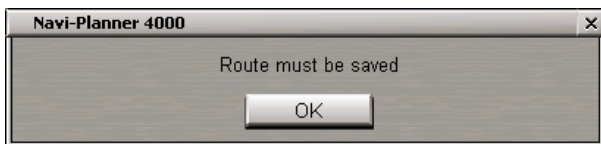


Press the **Protect** button in the **Protection control** group.

The route will be protected from editing, and the letter “[P]” will be added to its name.



If the route has not been saved, the following warning will be displayed after a press on the **Protect** button:



Press the **OK** button and save the route.

The protected route can neither be saved under the previous name, nor deleted. If saved under an altered name, the route loses its “Protected” status.

## Handling Schedules

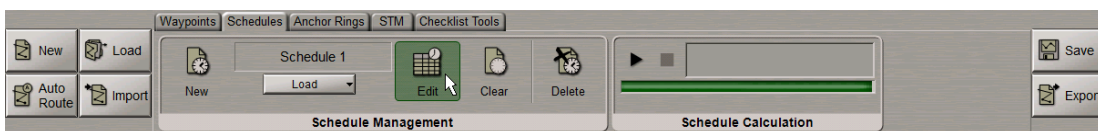
### Drawing a Schedule

Press the button in the Task Selection Area to switch to the **Route** task.



Load the route for which the schedule will be drawn for (see *Route Loading and Unloading* section).

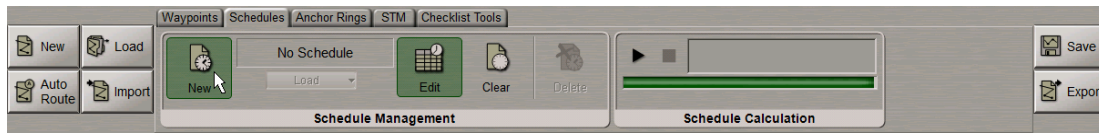
In the Ribbon switch to the **Schedule** tab and press **Edit** button in **Schedule Management** group.



The bottom part of the screen will display the corresponding table.

WPT	Name	ETA	Slay	Time Zone	ETD	TTG	Total Time	Speed
0	St-Petersburg	XX-XX-XX XXXX	XX-XX-XX XXXX	00:00		XX-XX-XX	XX-XX-XX	XXX.X
1				00:00				
2				00:00				
3				00:00				
4				00:00				
5	Pilot buoy			00:00				
6				00:00				

To draw a new schedule, in the Ribbon press **New** button in **Schedule Management** group.



Enter the schedule elements for the WPT's to **Schedule** table. To do this, perform the procedures detailed below:

- position the cursor on **ETA** element cell (not set for the route start point). Double click the left trackball button to activate the cell;
- enter ETA for this WPT and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **Stay** element cell; double click the left trackball button to activate the cell;
- enter the time of stay at this WPT and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **Time zone** element cell; double click the left trackball button to activate the cell;
- enter the time zone at this WPT and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **ETD** element cell (not set for the route end point); double click the left trackball button to activate the cell;
- enter **ETD** for the WPT and press the right trackball button;
- press **Apply** button to confirm the changes you have made;



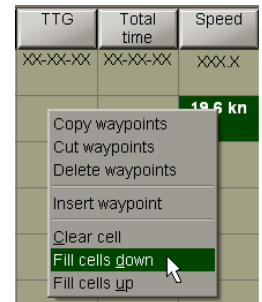
- position the cursor on **Speed** element cell; double click the left trackball button to activate the cell;
- enter the speed value on the route leg; press the left trackball button.



NOTE: There is no editing of **TTG** and **Total Time** cells.

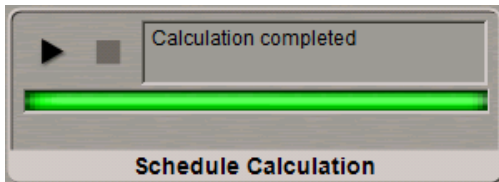
When filling in the table you can use the context menu called by the right trackball button:

- **Insert waypoint** – to insert a new waypoint (see section *Route Editor*, paragraph *Tabular Route Editing Method*, item *Setting a New WPT*);
- **Delete waypoint** – to delete a waypoint see section *Route Editor*, paragraph *Tabular Route Editing Method*, item *Deleting a WPT*);
- **Clear cell** – to delete a value in the selected cell;
- **Fill cells down** – to fill in all the cells below with a value entered in the selected cell;
- **Fill cells up** – to fill in all the cells above with a value entered in the selected cell.



**ATTENTION!** For the route start point, ETD value should always be specified. For the end point, it is necessary to specify ETA or speed of proceeding along the route legs.

Press  button in **Schedule Calculation** group: the schedule will be calculated.



The schedule calculation process is reflected in the display window. In the table, empty cells will be filled in with the calculated schedule elements.

WPT	Name	ETA	Stay	Time Zone	ETD	TTG	Total Time	Speed
0	St-Petersburg	XX-XX-XX XX:XX	XX-XX-XX XX:XX	03:00 E	25-12-17 19:00	XX-XX-XX	XX-XX-XX	XXX.X
1		25-12-17 19:01		03:00 E	25-12-17 19:01	00 d 00 h 01 min	00 d 00 h 01 min	12.0 kn
2		25-12-17 19:03		03:00 E	25-12-17 19:03	00 d 00 h 02 min	00 d 00 h 03 min	12.0 kn
3		25-12-17 19:06		03:00 E	25-12-17 19:06	00 d 00 h 02 min	00 d 00 h 06 min	12.0 kn
4		25-12-17 19:56		03:00 E	25-12-17 19:56	00 d 00 h 50 min	00 d 00 h 56 min	12.0 kn
5	Pilot buoy	25-12-17 20:09		03:00 E	25-12-17 20:09	00 d 00 h 12 min	00 d 01 h 09 min	12.0 kn
6		25-12-17 20:17		03:00 E	25-12-17 20:17	00 d 00 h 07 min	00 d 01 h 17 min	12.0 kn

A schedule has been created.

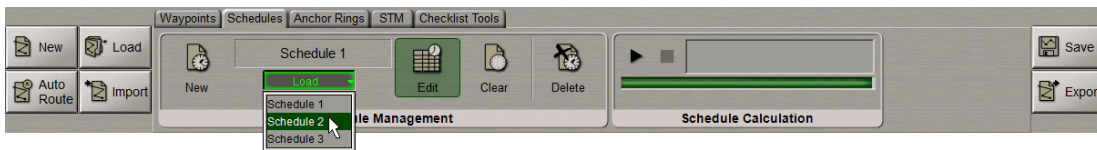
## Editing a Schedule



Press the button in the Task Selection Area to switch to the **Route** task.

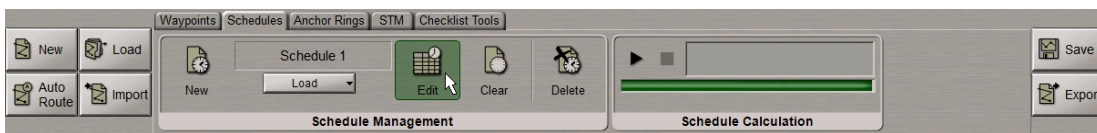
Load the route for which the schedule will be drawn for (see *Route Loading and Unloading* section).

In the Ribbon, switch to the **Schedule** tab. The currently loaded schedule is displayed over the **Load** button in the **Schedule Management** group. To load another schedule, press the **Load** button.



From the drop-down list select a schedule which should be edited.

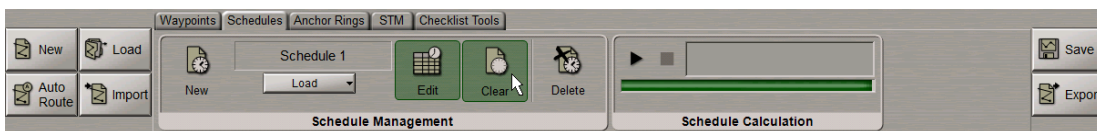
In the Ribbon, switch to the **Schedule** tab and press the **Edit** button in the **Schedule Management** group.



The bottom part of the screen will display the corresponding table.

WPT	Name	ETA	Stay	Time Zone	ETD	TTG	Total Time	Speed
0	St-Petersburg	XX-XX-XX XX-XX	XX-XX-XX XX-XX	03:00 E	25-12-17 19:00	XX-XX-XX	XX-XX-XX	XXX X
1		25-12-17 19:01		03:00 E	25-12-17 19:01	00 d 00 h 01 min	00 d 00 h 01 min	12.0 kn
2		25-12-17 19:03		03:00 E	25-12-17 19:03	00 d 00 h 02 min	00 d 00 h 03 min	12.0 kn
3		25-12-17 19:06		03:00 E	25-12-17 19:06	00 d 00 h 02 min	00 d 00 h 06 min	12.0 kn
4		25-12-17 19:56		03:00 E	25-12-17 19:56	00 d 00 h 50 min	00 d 00 h 56 min	12.0 kn
5	Pilot buoy	25-12-17 20:09		03:00 E	25-12-17 20:09	00 d 00 h 12 min	00 d 01 h 09 min	12.0 kn
6		25-12-17 20:17		03:00 E	25-12-17 20:17	00 d 00 h 07 min	00 d 01 h 17 min	12.0 kn

If it is necessary to delete all the table elements that were not entered manually but calculated by the program, press the **Clear** button in the **Schedule Management** group.



To edit schedule elements, perform the procedures detailed in the previous section.

**ATTENTION!** For the route start point ETD value should always be specified. For the end point, it is necessary to specify ETA or speed of proceeding along the route legs.

Create the schedule anew and save it as detailed in the previous section.



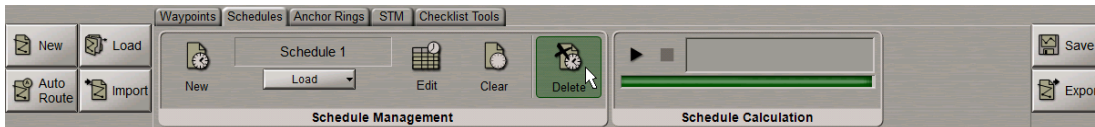
## Deleting a Schedule

Press the button in the Task Selection Area to switch to the **Route** task.

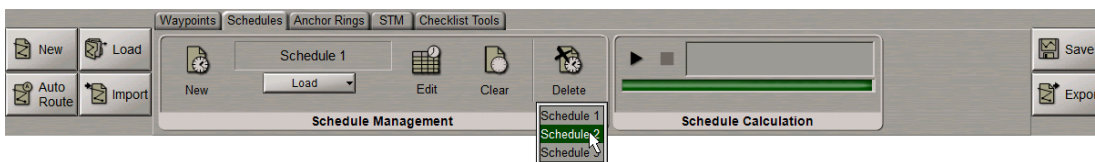


Load the route for which the schedule should be deleted (see *Route Loading and Unloading* section).

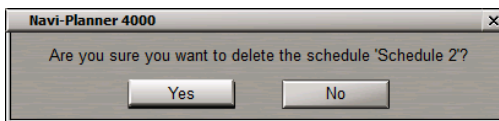
In the Ribbon, switch to the **Schedule** tab and press the **Delete** button in the **Schedule Management** group



Select the schedule which should be deleted from the list, and press the left trackball button.



In the window, which will appear, confirm the deleting.



The schedule will be deleted.

## Handling Checklists

### Creating and Saving Checklist

**ATTENTION!** Check list cannot be created until a route is loaded or created.

Press the button in the Task Selection Area to switch to the **Route** task.



Load the route for which the schedule will be drawn for (see *Route Loading and Unloading* section).

In the Ribbon switch to **Waypoints** tab and press **WPTs Table** button in **Info** group .



The bottom part of the screen will display the corresponding table.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0		59° 53.635 N 030° 13.243 E	XX	XXXX XXXX	XXXX	XXXX XXXX	XXXX		XXX.X	XXX.X	XXX.X	XXX.X	XXX.X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
5		59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined

In the Ribbon switch to **Checklist Tools** tab and press **Checklist** button in **View** group .



The bottom part of the screen will display the corresponding table.

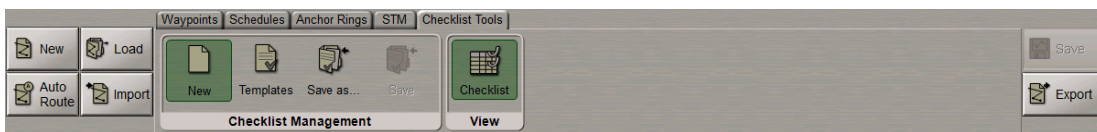
WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0	St-Petersburg	59° 53.635 N 030° 13.243 E	XX	XXXX XXXX	XXXX	XXXX XXXX	XXXX		XXX.X	XXX.X	XXX.X	XXX.X	XXX.X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM	Undefined	10.0 m	0.8 m	2.7 m	5.0 m	
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM	Pilot on board	10.0 m	0.8 m	2.8 m	5.0 m	
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	2.9 m	5.0 m	
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	4.0 m	5.0 m	
5	Pilot buoy	59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM	Pilot disembarkation. Slow speed.	10.0 m	0.8 m	4.0 m	5.0 m	
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	4.8 m	5.0 m	
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		10.0 m	0.8 m	4.0 m	5.0 m	

Activity	Time	Moment
+		

In the **Waypoints** table select the waypoint to which the check list activity is about to be corresponded.

In the Ribbon switch to **Checklist Tools** tab. Press **New** button in **Checklist Management** group.



Position the cursor on **Activity** element cell; double click the left trackball button to activate the cell.

Activity	Time	Moment
1 Check the pilot ladder		
+		

Enter the name of action which should be checked and press <Enter> button.

Activity	Time	Moment
1 Check the pilot ladder	00 h 30 m	
+		

Position the cursor on **Time** element cell. Double click the left trackball button to activate the cell. Set the desired time period when a check list activity is about to be appeared and checked respectively.

Activity	Time	Moment
1 Check the pilot ladder	00 h 30 m	Apply Cancel
+		

Press **Apply** button to confirm the changes you have made.

Position the cursor on **Moment** element cell. Double click the left trackball button to activate the cell.

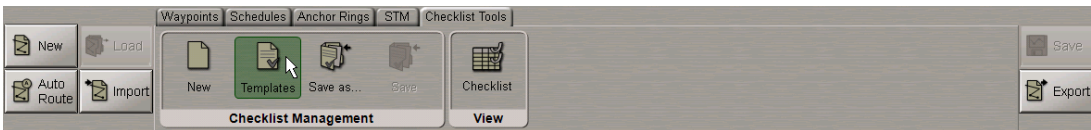
Activity	Time	Moment
1 Check the pilot ladder	30 min.	after
		after
		before

Select the moment you want the activity to be appeared.

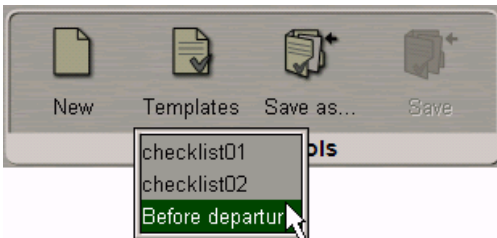
Enter the necessary number of actions for checking.

You can use a template for making checklists or load a previously saved route.

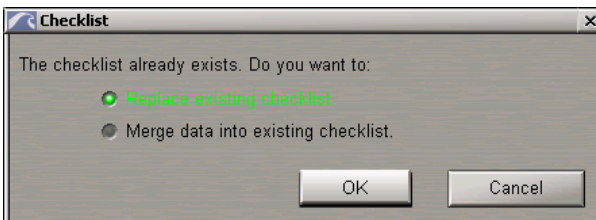
To do this, in the Ribbon press **Templates** button in **Checklist Management** group.



Select the necessary template or previously saved route from the drop-down list.



As a template is added to the checklist created for some WPT, the following warning will be displayed:

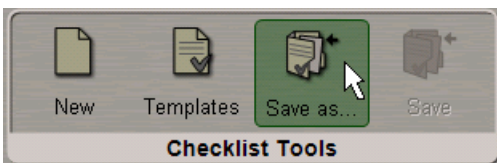


Select the necessary action and press **OK** button.

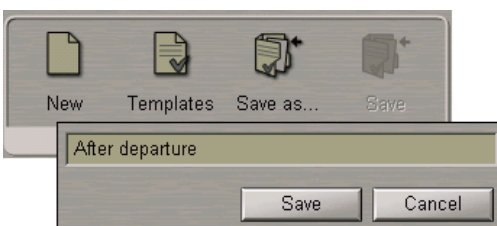
The checklist will be formed with regard to the selected template.

Create checklists for the necessary route WPT's.

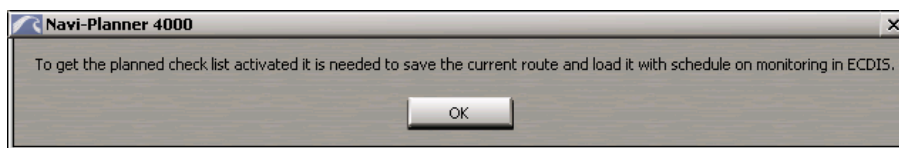
In the Ribbon press the **Save As** button in **Checklist Tools** group.



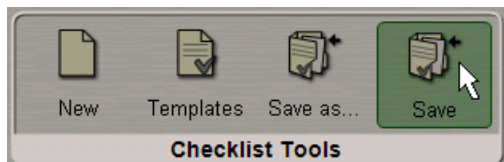
Enter the checklist name and press **Save** button.



When route is saved with the new checklist, the following warning will be displayed:



If an already existing checklist is loaded, and some changes have been made in it, the **Save** button is activated:



To save the changes you have made, press the **Save** button.

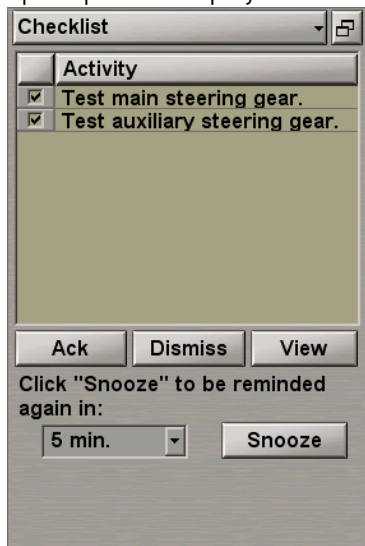
## Use of Checklist in the MFD

**ATTENTION!** For this functionality to be used, the Navi-Panner 4000 should be used in combination with the Navi-Sailor 4000 ECDIS software.

Run Navi-Sailor 4000 ECDIS (see document *Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). User Manual, Chapter 2, section Turning the ECDIS Task On*).

Load the monitoring route and schedule (see document *Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). User Manual, Chapter 4, section Loading of Route and Schedule in the Navigation Mode, paragraphs Loading Route and Loading Schedule*).

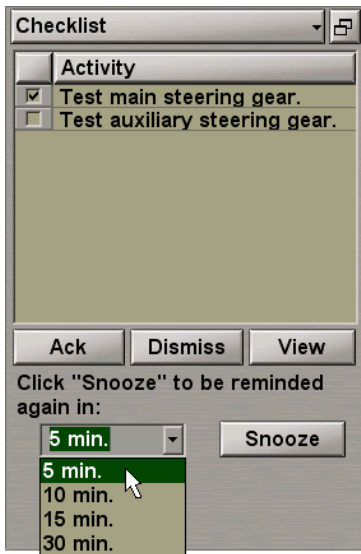
With the coming of the moment scheduled by the checklist for a check, the **Checklist** display will automatically open up in the Display Panel window of the Control panel.



The time of the check is determined by the parameters set in the **Time** and **Moment** columns during the checklist formation (see the previous paragraph). It should be noted that if the ship is proceeding along the route, the ship's current speed (SOG) is used for determining the ETA, and ETD for WPT"0" from the loaded schedule if it is staying in a port.

The table shows the Checklist items which are required to be checked. The operator then has three options: to postpone the check, to make check and approve the checklist item, and to reject the check. To carry out any of these actions, check checkboxes next to the checklist items which this operation will be applicable to.

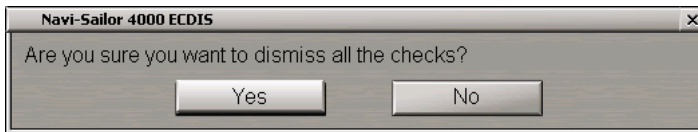
To put off the check, select the time interval from the drop-down list to the left of the **Snooze** button.



Press the **Snooze** button. Selected items will disappear from the table and will re-appear in it after the end of the selected time interval, the **Checklist** display will automatically open up again.

To approve the selected checklist items press the **Ack** button.

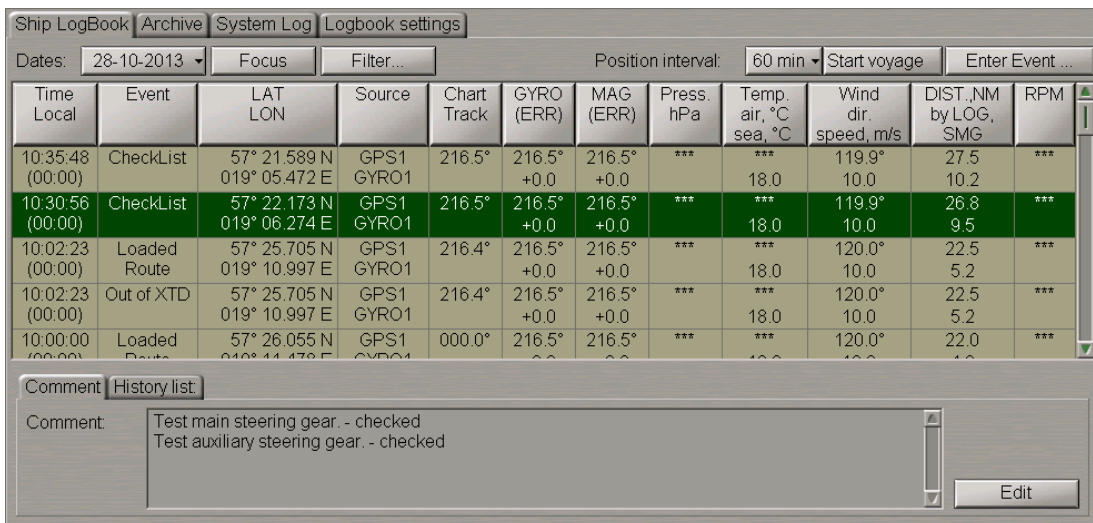
To reject the check of the selected checklist items, press the **Dismiss** button.



Press **Yes** button to dismiss all selected checks.

**ATTENTION!** For recording the check list activities in the Ship LogBook, the Ship LogBook option should be licensed. To enable the recording of these actions in the Ship LogBook, perform them on the WS's from which the events can be entered in the Ship LogBook (see document *Multi-Functional Display (v.3.01.350). Functional Description*, Chapter 6, section *Ship Logbook*, paragraphs *Ship Logbook Fomation Principles*).

The relevant event will be recorded in the Ship LogBook.



The **Comment** tab specifies the relevant checklist item and its status. To view the Ship LogBook page which the checklist is displayed on, press the **View** button in **Checklist** display.

The screenshot shows a 'Print Preview' window with a checklist table. The window title is 'Print Preview' and it includes navigation buttons (back, forward) and a 'Send to Shore' button. The table has the following data:

Checklist				
No.	Activity	Moment	Waypoint No.	Status
0	Test main steering gear.	4 hr(s) before ETD	20	Checked / Done
1	Test auxiliary steering gear.	5 hr(s) before ETD	20	Checked / Done
2	Emergency power supply.		20	Planned
3	Main and auxiliary engines.		20	Planned
4	Test communication with engine room.		20	Planned
5	Anchor gear.		20	Planned
6	The rudder angle indicator in relation to the actual position of the rudder.		20	Planned
7	Navigation and signal lights.		20	Planned
8	All life saving appliances in working order and ready for immediate use.		20	Planned
9	First radar.	4 hr(s) 30 mins before ETD	20	Not Checked / Not Done
10	Second radar.		20	Planned
11	Gyro compass.		20	Planned
12	Magnetic compass.		20	Planned
13	Electronic position fixing systems.		20	Planned
14	Equipment for measuring speed and distance.		20	Planned
15	Radio telegraphy equipment.		20	Planned
16	Radio telephony equipment.		20	Planned
17	GMDSS radio equipment.		20	Planned
18	Radio equipment for life-saving appliances.		20	Planned
19	Synchronization of time in recording instruments and clocks.		20	Planned

The **Status** column specifies the status for each checklist item:

- Planned – the check is scheduled;
- Checked/Done – the check has been made by the operator;
- Not Checked/ Not Done – the check has been rejected by the operator and has not been carried out.

# Voyage Plan

This chapter describes the procedure used in the handling of voyage plan.

---

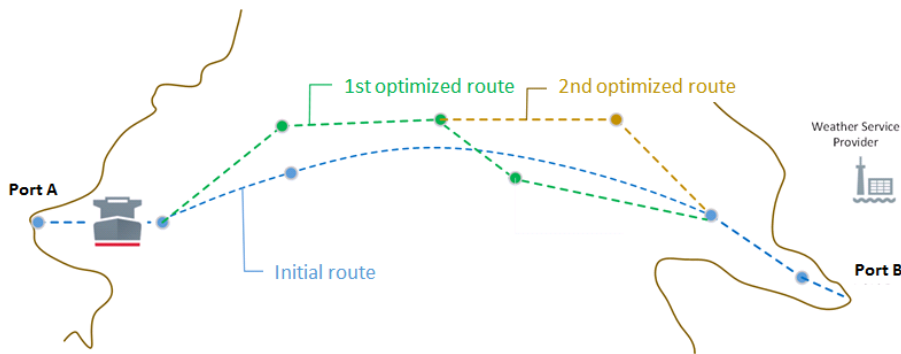
<b>General Information</b> .....	<b>72</b>
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## General Information

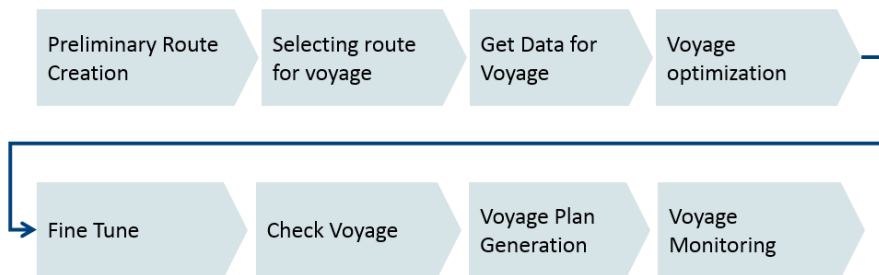
The Advanced Data Delivery (ADD) service permits the user to optimize a voyage plan based on an available route. This implies the following:

- **Route** is a series of waypoints connected by one or more legs including both straight and curved segments
- **Voyage** is a set of information and data for a passage from A to B. A voyage may consist of more than one route and includes information like reporting and reference points, checklists, under keel/overhead clearance, nautical information, schedule, etc.

Given below is an example of a voyage with routes weather-optimized while sailing.



The voyage planning stages can be schematically shown as follows:



At the Preliminary Route Creation stage (see *Chapter 2*, section *Creating a Route*) the user creates a route and a schedule by using the following preset data:

- Global Routeing charts (see *Chapter 10*);
- TX-97 charts WCF (1:250 000 to 1:500 000);
- MARPOL areas (see *Chapter 9*).

After the source route has been created, it is necessary to perform the following steps described below:

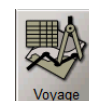
- Select a route for the voyage;
- Optimize the voyage in consistent with the weather forecast and geometry;
- Get data for the voyage;
- Fine-tune the voyage;
- Check the voyage and edit the route to take into account dangers to navigation;
- Generate a voyage plan;
- Print-preview and print out the voyage plan;
- Load the voyage for monitoring.



**ATTENTION!** While creating a voyage, you should bear in mind that a user can make an unlimited number of data orders provided he/she will use it. When data is re-ordered, e.g., because of the voyage optimizing or route editing, previous data that is not used for a new optimized voyage (edited route) is deleted. It is additional data which is ordered, as the result the user obtains an optimally planned route provided with all the necessary data. It is then necessary to confirm that the voyage will be used for the vessel progress from A to B, whereupon the voyage should be loaded for monitoring in the ECDIS. Payment is made only for the data that was used for creating a voyage as of its confirmation time. If the data was received but no deleted from the route selection slot, and for some reasons no confirmation followed within 20 hours of its receipt, the voyage is considered to be confirmed.

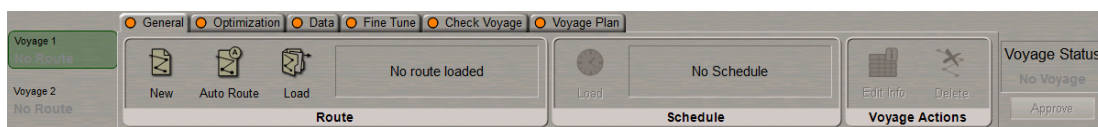
## Selecting Route for Voyage

Press the button in the Task Selection Area to switch to the **Voyage** task.



To order the voyage data used two slots: **Voyage 1** and **Voyage 2**. They are handled in a similar manner, although with some limitations for the **Voyage 2** slot, which will be considered below in the paragraph *Handling Slot for Voyage 2*.

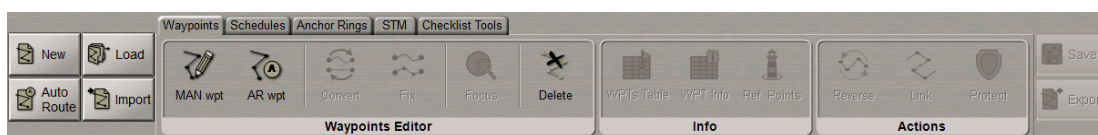
In the Ribbon, press the **Voyage 1** button for creating Voyage 1.



If the route has not been yet created, to create a route manually, in the Ribbon switch to the **General** tab press the **New** button in the **Route** group.



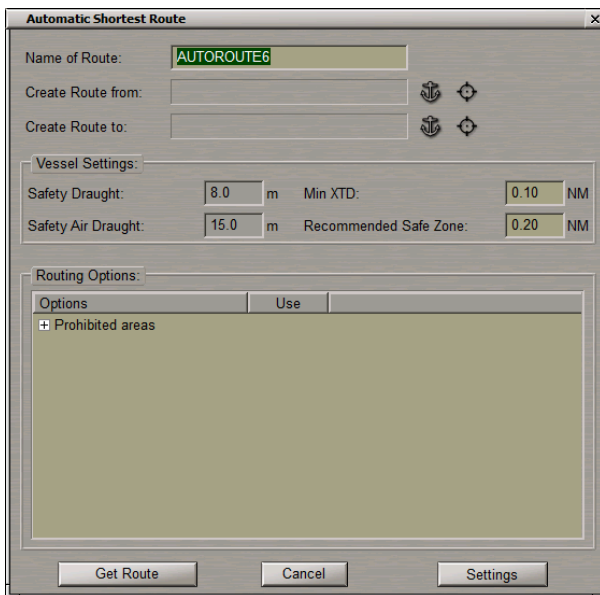
The program will automatically switch to the **Route** task.



To create a route in the automatic mode, in the Ribbon, press the **Auto Route** button in the **Route** group.

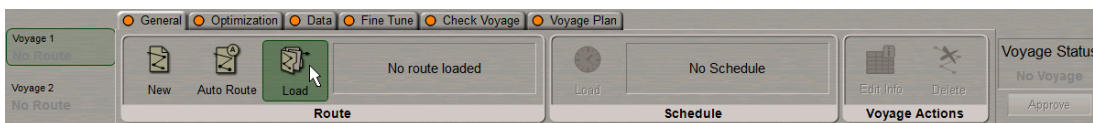


The program will automatically switch to the **Route** task, and the **Automatic Shortest Route** window will open.



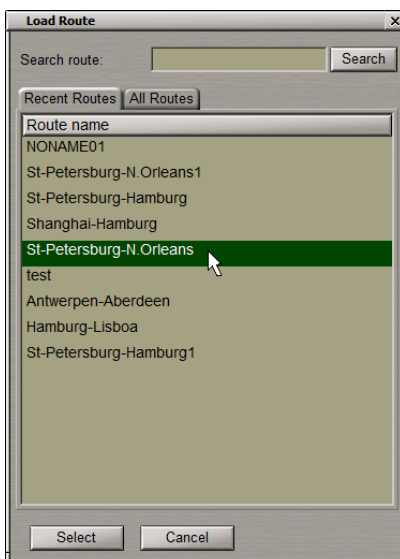
## Loading Route to Slot for Voyage 1

In the Ribbon switch to **General** tab. Press the **Load** button in the **Route** group.



In the **Load Route** window which will open, the **Recent Routes** tab presents the last viewed routes on the Chart Panel, the **All Routes** tab contains all the routes in the internal database.

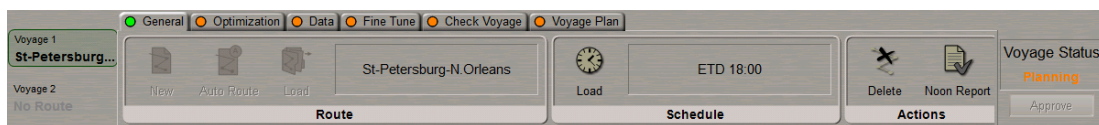
Switch to the necessary **Recent Routes** or **All Routes** tab.



In the list, select the route required to be loaded for voyage creation.

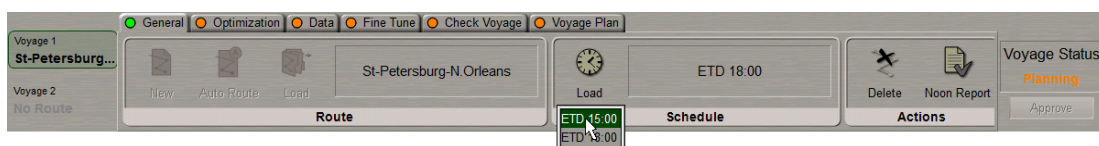
To search for a route by its name, enter the first characters of the route name in the **Search route** line and press the **Search** button.

Press the **Select** button. The selected route will be loaded.



While no route has been loaded, the voyage status in the **Voyage Status** group is "No Voyage". After loading, it will change to "Planning".

Loaded simultaneously with the route will be a schedule which was loaded as of the route saving time. Load the necessary schedule as required. To do this, press the **Load** button in the **Schedule** group.

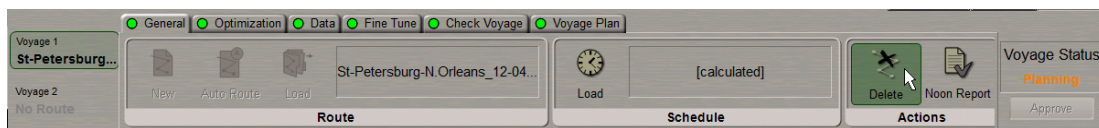


Select the necessary schedule from the list.

There is an indicator on the **General** tab. When no route is loaded for a voyage, the indicator light is orange, if all the data is correctly loaded, it is green.

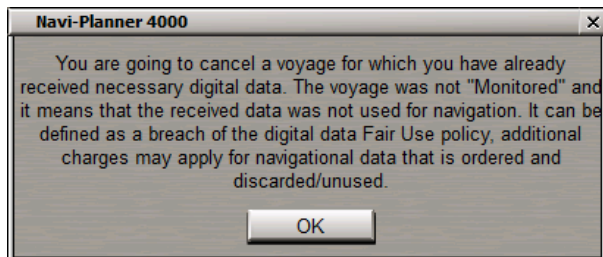
## Deleting Route from Slot for Voyage 1

In the Ribbon, in the **Actions** group press the **Delete** button.



The route will be deleted from the slot. If the data was ordered, but there has been no confirmation that the voyage is used on the ship, the route will be deleted in a similar manner.

If there has been a voyage use confirmation, but it is not loaded for monitoring (see section *Loading Voyage for Monitoring*), a relevant warning will be provided:



Press the **OK** button to close the window.

## Handling Slot for Voyage 2

The **Voyage 2** slot is handled in much the same way as a slot for **Voyage 1**, with some limitations, however.



It is impossible to order data in the **Voyage 2** slot if the data was ordered, but the use of voyage in the **Voyage 1** slot has not been confirmed. In this case, buttons in the **Voyage 2** slot will be disabled (except for the Delete button).



If data was ordered in the **Voyage 1** slot, and the use of the voyage was confirmed, you can order data in the Voyage 2 slot (the **Get Data** button is enabled).

## Voyage Optimization

**ATTENTION!** The voyage optimization consistent with the weather forecast is not possible unless the Advanced Intelligent Routing option is additionally licensed.

Press the button in the Task Selection Area to switch to the **Voyage** task.



The voyage optimization taking into account weather conditions permits right-in-time arrival to be planned and/or costs saved. In Navi-Planner 4000, you can use two methods of optimization with regard to weather conditions:

- Optimization by the given speed: the fastest arrival within the given speed limits;
- Optimization by the given ETA: right-in-time arrival with the lowest fuel consumption.

The route will be re-drawn so that the selected parameters are the most favourable in the context of optimization settings.

The optimization will also take into account No-Go areas which the optimized route will circumvent.

## Presettings for Voyage Optimization

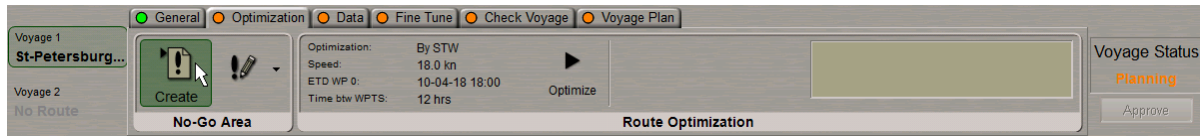
### Work with No-go Areas

For route optimization, it is possible to use special areas (No-Go Areas) which should be avoided in plotting the route. E.g., these may be temporary area type objects announced in the NAVAREA.

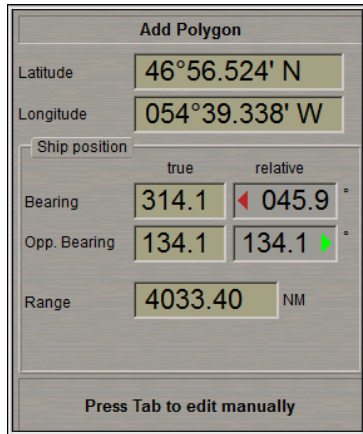
The No-Go areas can be created, their shape altered, they can also be deleted. After the exit from the No-Go Areas creation mode, they are saved automatically. In the case of the route weather optimizing, the route will be plotted so that it does not pass through No-Go Areas.

To create a No-Go area, in the Ribbon switch to the **Optimization** tab.

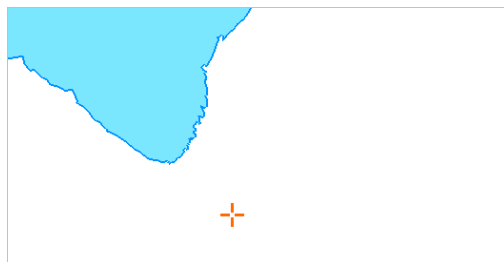
Press the **Create** button in the **No-Go Area** group.



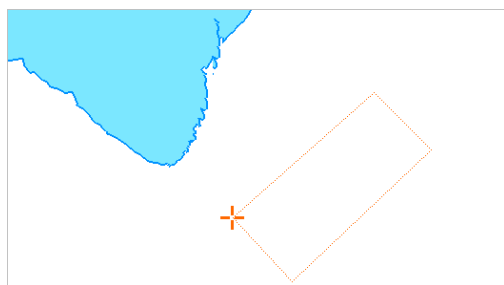
The graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Polygon** information window with cursor coordinates.



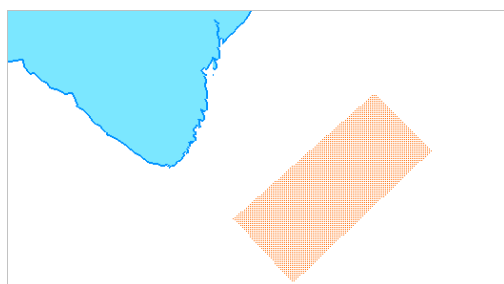
Press the left trackball button to set the initial point of a No-Go area.



After the plotting of the initial point, move the cursor to the next point and press the left button again. Repeat the procedure until you set the required number of points.



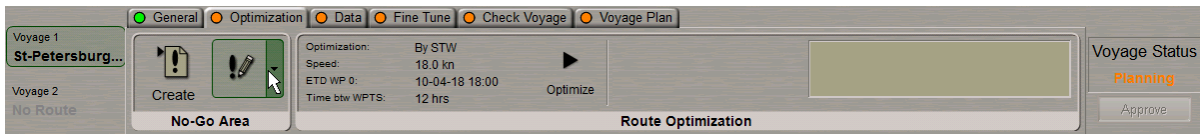
After the input of the last point of the No-Go area, press the right trackball button: the cursor will change its form, and the No-Go area will be set in the specified coordinates: the area set by the points, the first and the last of them connected.



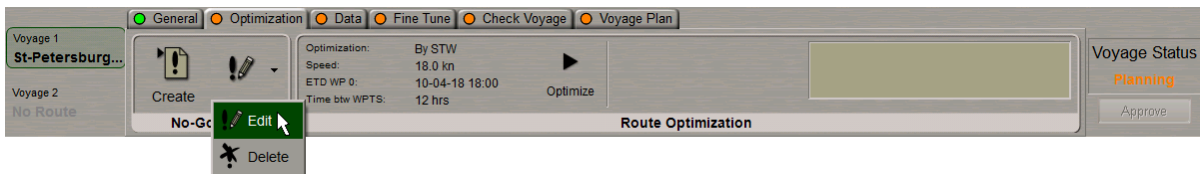
After the creation of the No-Go area, it will be automatically saved.

Create the necessary number of No-Go areas by using again the **Create** button in the **No-Go Area** group.

To edit No-Go Area, in the Ribbon press the arrow button in the **No-Go Area** group.

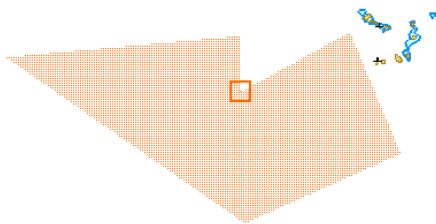


To change the No-Go area dimensions, from the drop-down list select the **Edit** item.

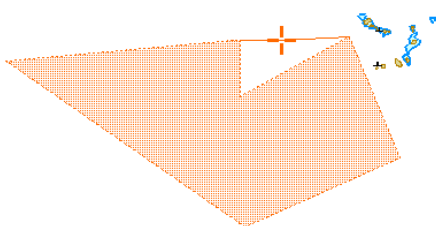


Position the acquisition marker which will appear, on the line (object boundary) and press the left trackball button.

**NOTE:** If it is necessary to change position of a No-Go area vertex, acquire it with the acquisition marker. If a new vertex is required to be created, use the acquisition marker to acquire a point on the necessary object boundary.



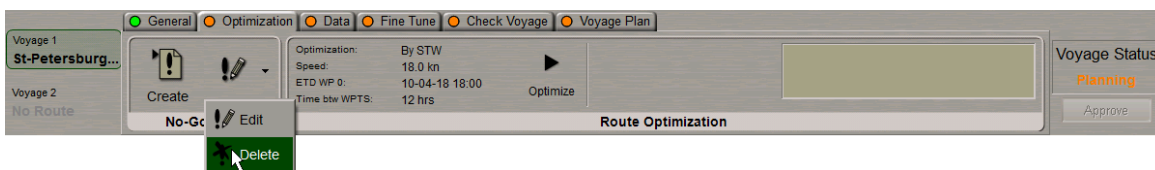
Move the cursor to the required coordinates. Press the left trackball button and repeat this operation until the necessary configuration is set.



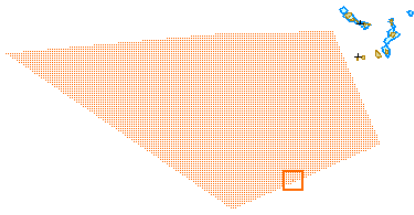
Press the right trackball button: the cursor will exit from editing mode and assume the form of the acquisition marker.

Position the acquisition marker on the next map object and edit it. Edit all the necessary map objects. To exit from the editing mode, press the right trackball button.

To delete a No-Go area, from the drop-down list select the **Delete** item.



Position the acquisition marker which will appear on the boundary of the No-Go area to be deleted.



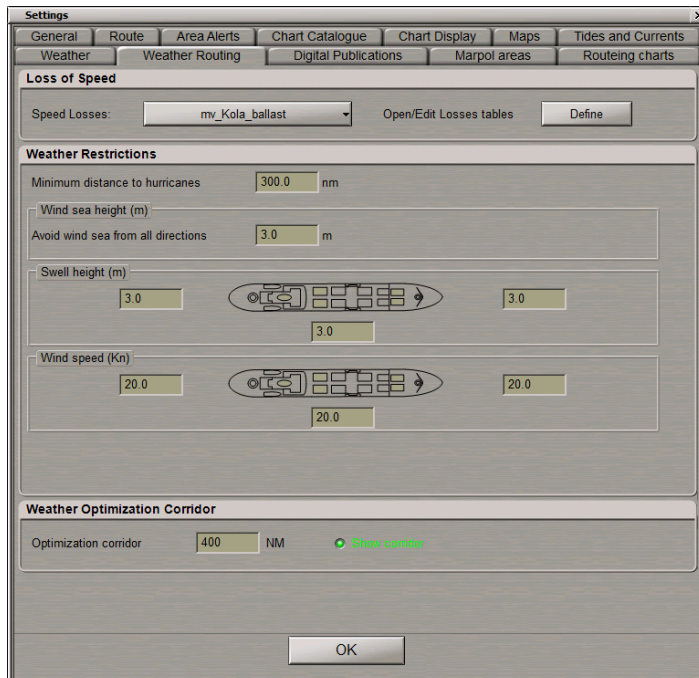
Press the left trackball button: the object will be removed.



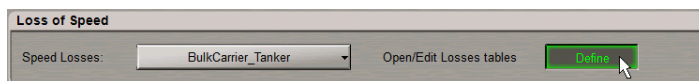
Press the right trackball button to exit from the map object deleting mode.

## Creating Speed Losses Tables

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to the **Weather Routing** page.



Press the **Define** button in the **Loss of Speed** group.



The **Speed Losses Table** window is intended for setting the ship speed loss values depending on the wind and sea direction. It is assumed that tables are drawn for a particular ship with different loading conditions (and windage accordingly) on the basis of available operational documentation.

The **Table name** column lists the following default ships:

- Bulk carrier/tanker 100-200 m;
- Container ship 100-200 m;
- Fishing vessel 50-100 m;
- Passenger 100-200 m;
- River-sea 50-100 m;
- VLCC (Very Large Crude Carrier) 200-300 m;
- Warship 70-150 m.

A ship with the `auto_` prefix will be automatically created in the **Table name** column. The program uses the own ship dimensions taken from the System Configuration utility (see document *Multifunctional Display. Navi-Sailor 4000 ECDIS (v. 3.01.350). Installation Guide, Chapter 2, section MFD Configuration, paragraph MFD Settings, item 3*) for selecting the suitable default ship and copies its speed loss tables.

In the **Table name** column, select the necessary ship type approximately matching your ship.

The **Basic Ship parameters** group displays the own ship characteristics.

Compare them to the own ship characteristics that are displayed in the **Own Ship Parameters** group.

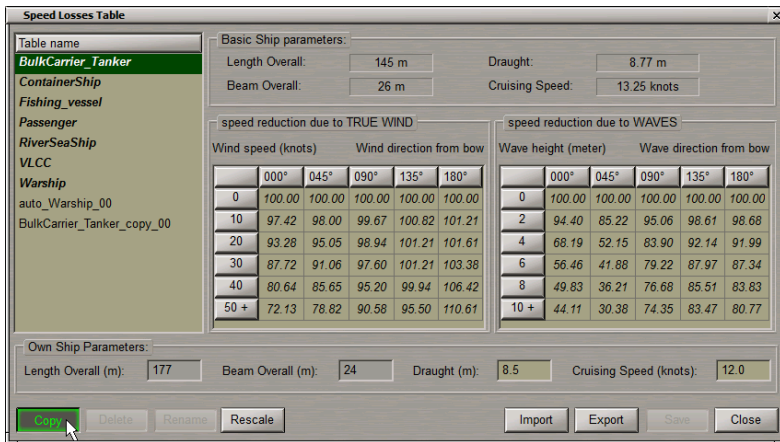
Use the **Draught** and **Cruising Speed** input boxes to enter the respective values for the own ship. They may vary depending, e.g., on different loading conditions. In this case, it would be necessary to create an individual copy for each ship loading condition.

Speed loss tables for the default ships (shown in the **Table name** table in bold italic) cannot be edited. So, after selecting a default ship you can either:

- Copy the default ship tables and edit them; or
- Copy tables of the default ship which suits best the own ship characteristics and then edit them as required.

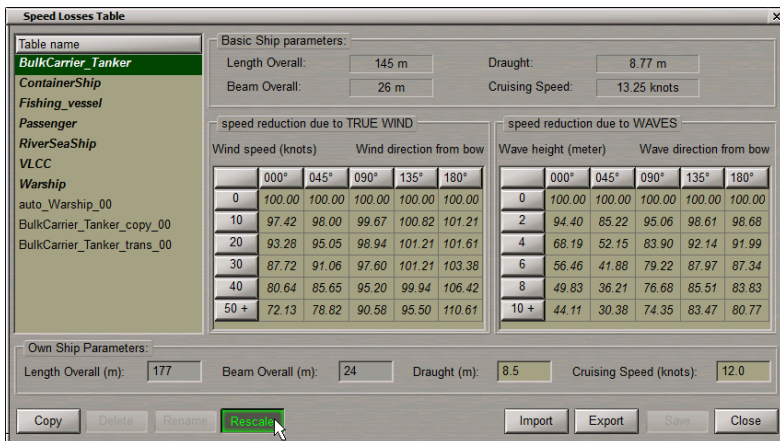


In the former case, after selecting a default ship press the **Copy** button in the left bottom corner of the **Speed Losses Table** window.



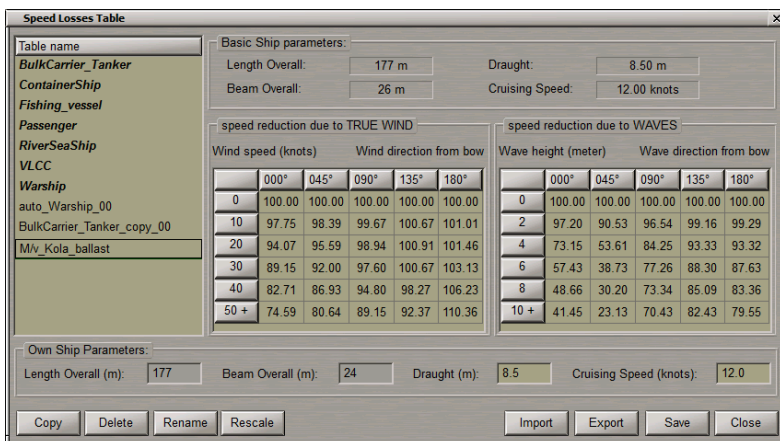
Upon that, a ship with the **\_copy\_** suffix will be created in the **Table name** column, for which speed loss tables will be copied from the selected default ship.

In the latter case, after selecting the default ship press the **Rescale** button in the left bottom corner of the **Speed Losses Table** window.



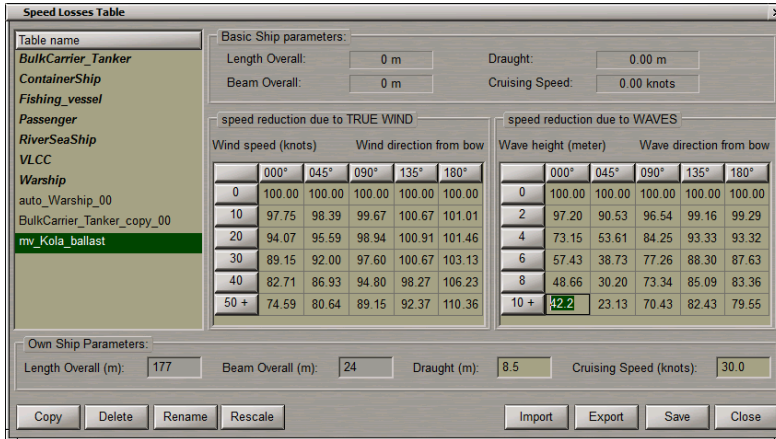
Upon that, the **Table name** column will be supplemented with a ship with the **\_trans\_** suffix for which speed loss tables will be copied from the default ship but recalculated to take into account values entered in the **Draught** and **Cruising Speed** input boxes in the **Own Ship Parameters** group.

Speed loss tables for ships created in this way in the **Table name** column can be edited, their names are shown in a regular font.



Correct the name for the copied ship if required. To do this, press the **Rename** button in the left bottom corner of the **Speed Losses Table** window and enter a new name in the **Table name** column.

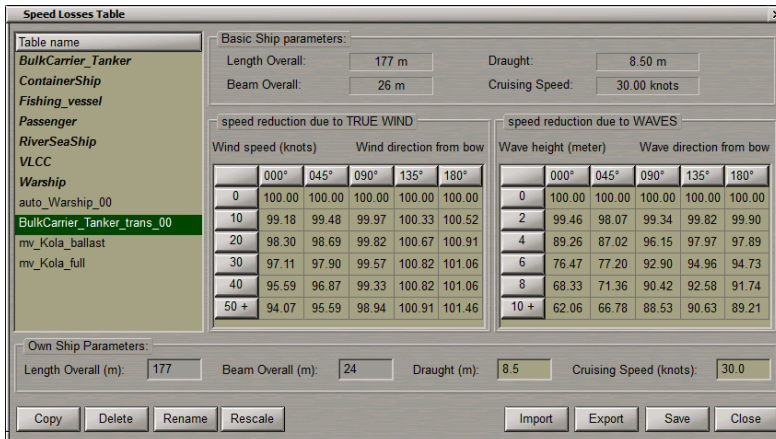
Edit all the table fields having in mind the fact that the cells specify the speed percentage in the absence of environmental effects. To do this, position the cursor on the necessary cell and click the left trackball button.



Edit the value in the cell and click the left trackball button again. Edit all the necessary cells.

To save the changes you have made, press the **Save** button in the right bottom corner of the **Speed Losses Table** window.

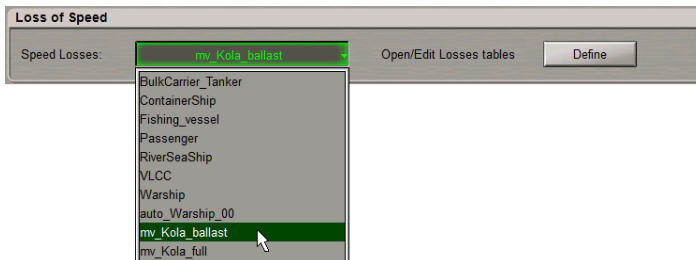
To delete a vessel from the **Table name** column, select it in the table.



Press the **Delete** button. The ship will be deleted from the table.

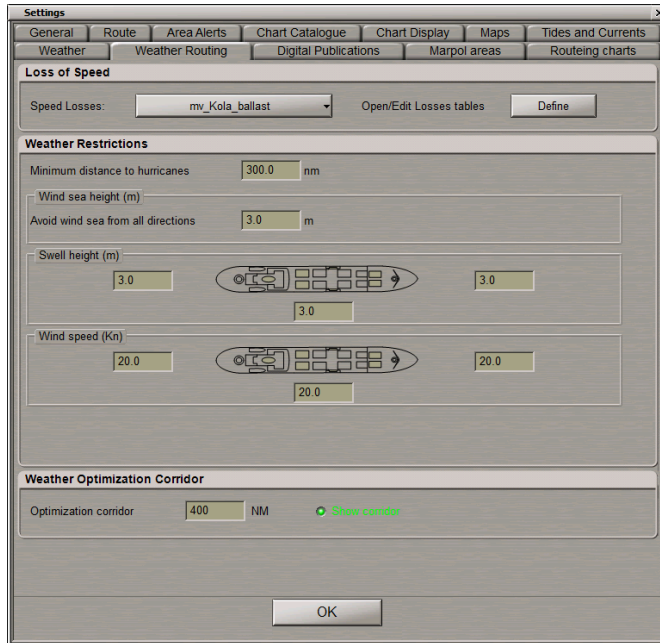
To exit from the **Speed Losses Table** window, press the **Close** button in the right bottom corner of the window.

Press the **Speed Losses** button and from the drop-down list select the necessary loading condition.



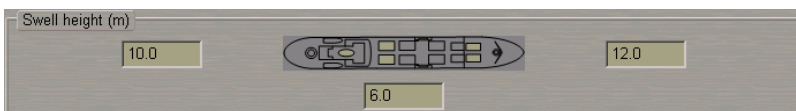
## Weather Restrictions Settings

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to the **Weather Routing** page.

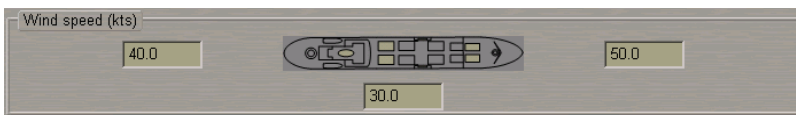


In the **Weather Restrictions** group, make the following settings which will be used for the weather routing optimization:

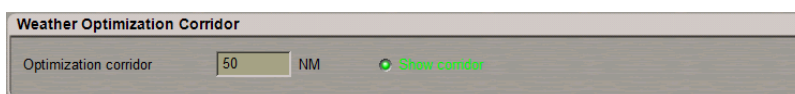
- **Minimum distance to hurricanes** – to set the minimum distance to the hurricanes track;
- **Avoid wind sea from all directions** – to set the maximum wind wave height which should be avoided for all the directions;
- **Swell height** –to set the maximum swell height which should be avoided (by directions – bow, stern, sides).



- **Wind speed** – to set the maximum wind velocity which should be avoided (by directions – bow, stern, sides).



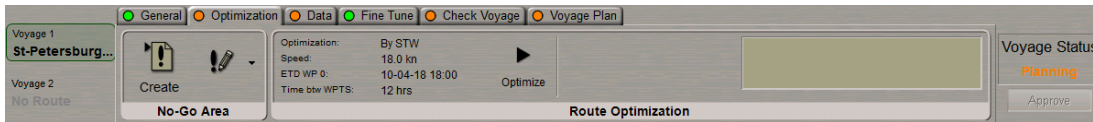
- Set the Weather Optimization Corridor parameters:
  - Use the **Optimization Corridor** box to set the width of the corridor for which weather optimizing will be performed;
  - Check the **Show corridor** checkbox for the Weather Optimization Corridor to be displayed on the Chart panel.



## Optimization of Voyage in View of Weather Forecast

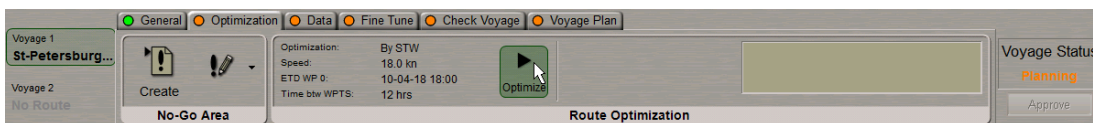
Load the route for which the optimization will be done (see the section *Route Loading and Unloading*).

In the Ribbon, switch to the **General** tab.

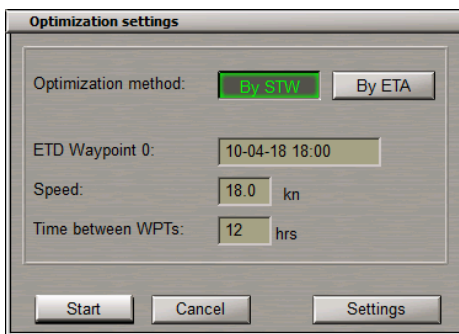


Create the necessary No-go Areas (see paragraph *Presettings for Voyage Optimization*, item *Work with No-go Areas* above).

In the Ribbon, press the **Optimize** button in the **Route Optimization** group.



The **Optimization settings** window will open up.



Select the optimization method by selecting one of the following buttons in the **Optimization method** row:

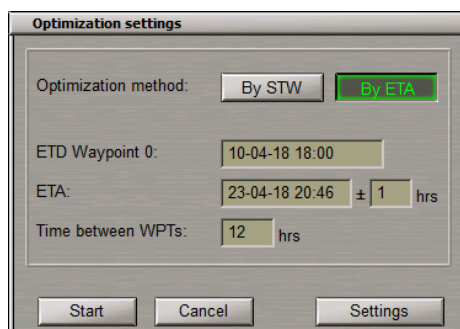
1. Press **By STW** to select the by-speed optimizing method and set the desired speed that the ship will maintain on the optimized route. In this case, the **Optimization settings** window looks as shown in the picture above.

In the **ETD Waypoint 0** input box, enter the ETD for the first waypoint of the route which will be optimized. By default, the ETD for WPT0 is taken from the loaded schedule.

In the **Speed** input box, enter to the STW value for legs of the route to be optimized.

In the **Time between waypoints** input box, set the time interval over which WPT's will be set during the route optimizing, i.e., what legs the route will be broken into (with regard to the set speed) during the optimizing.

2. Press the **By ETA** to select the by-ETA optimizing mode. The schedule for the optimized route will be drawn so as to arrive in the route end point at the set time. In this case the **Optimization settings** window looks as follows:



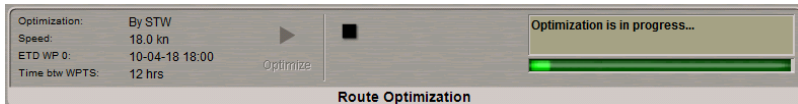
In the **ETD Waypoint 0** input box, enter the ETD of the first waypoint of the route. By default, the ETD for WPT0 is taken from the loaded schedule.

In the **ETA** input box, enter the value of ETA at the route end point, use the input box to the right to enter the ETA corridor value ( $\pm$  the set number of hours).

In the **Time between waypoints** input box, set the time interval over which WPT's will be set during the route optimizing, i.e., what legs the route will be broken into (with regard to the set speed) during the optimizing

If it is necessary to change optimizing parameters, press the **Settings** button: the **Settings** window will open (see paragraph *Presets for Voyage Optimization*, item *Weather Restriction Settings* above).

Press the **Start** button.






After the optimization, the program will generate a report specifying optimized route parameters, warnings or the reason why the route optimization failed.



The program tries to plot the route so that it does not cross the shore or No-Go areas (for legs the Great Circle leg type is used). If the route reconstruction fails, weather parameters are checked, and the program tries to plot the route anew so that weather parameters do not exceed settings on the **Weather Routing** page of the **Settings** window. If an attempt to reconstruct the route so as to avoid all the weather conditions exceeding the permitted values failed, there will be a warning about the permitted weather condition values being exceeded on certain legs.

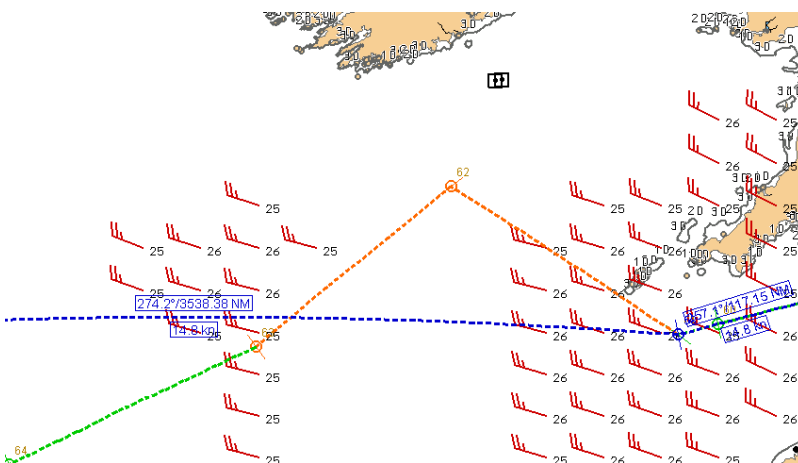
All the route reconstructions are made within the Weather Optimization Corridor. The program always constructs the route with regard to the selected ship type and values entered in the Speed Losses table (see paragraph *Presettings for Voyage Optimization*, item *Creating Speed Losses Tables* above).



After the optimizing, the program will create a route under the same name and **\_DD-MM-hh-mm-ss** postfix, e.g.: **St.Petersburg-New Orleans\_11-04\_10-09-38** (where DD - date, MM - month, hh- hours, mm - minutes, ss - seconds of creation).


To view the detected warnings, use  and  buttons to select the warning you are interested in. Press  button.

The leg that that the warning was output for, will be shown in the centre of the Chart panel.

In this case, the best chart on the original scale will be loaded.



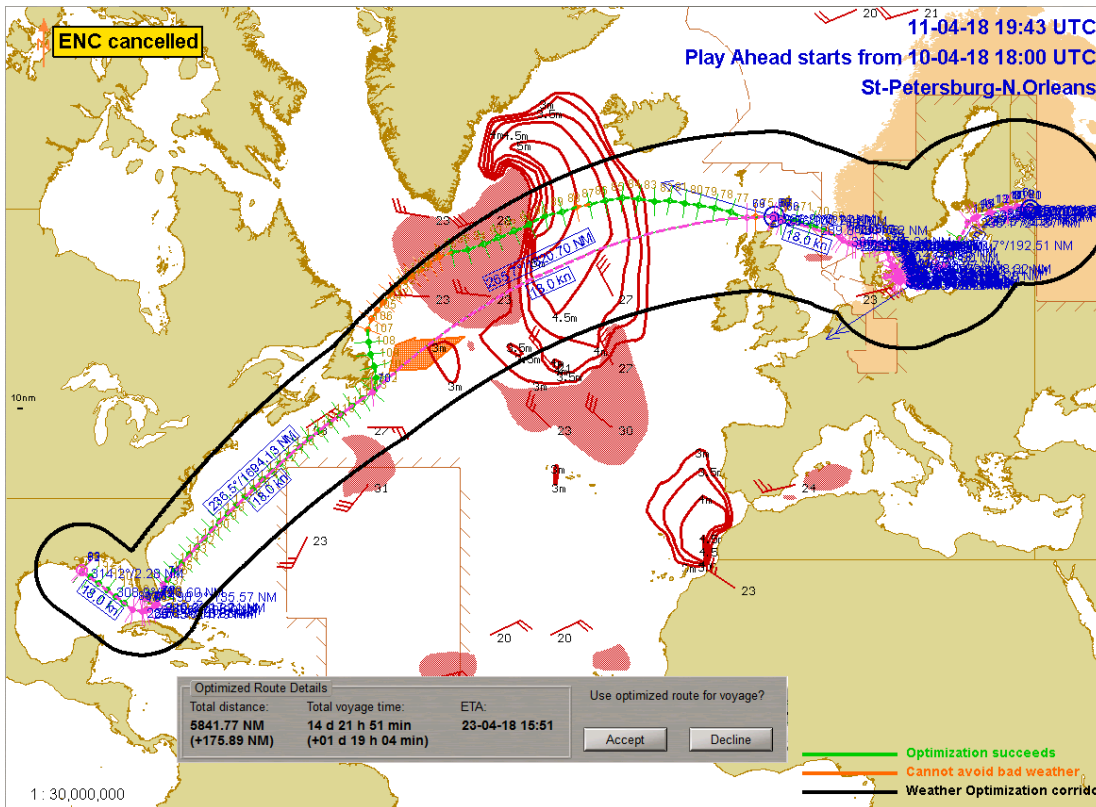
To edit the route to take into account weather conditions, use the  and  buttons to select the required warning.

To turn on the pre-play of the ship motion along the route, press the  button. The ship will be shown in the animation mode.

If necessary, press the button on the Chart Panel toolbar and check the **Weather** checkbox in the **Environment** group in the **Overlays Visualization** window to turn on the weather layer on the Chart Panel (see *Chapter 7, section Obtaining Information on Weather Parameters*).



In this case, it is possible to view routes against the background of changing weather conditions (see the example above). To this end, appropriate weather conditions display settings should be made (see *Chapter 8, section Obtaining Information on Weather Parameters*).



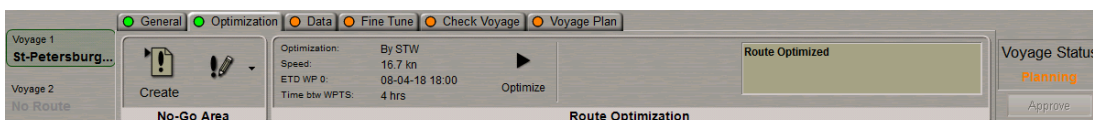
The right bottom corner contains colour conventions used for displaying different legs of an optimized route depending on their status. Legs on which weather parameters do not exceed the permissible values are shown in green, and the legs where they do, are shown in orange. E.g., if the Weather Optimization Corridor were wider, and an area with weather parameters exceeding the permitted values could be avoided, all the optimized route legs would be shown in green.


The bottom part of the screen displays the **Optimized Route Details** window with optimized route parameters.



For the subsequent use of the optimized voyage route, press the **Accept** button.

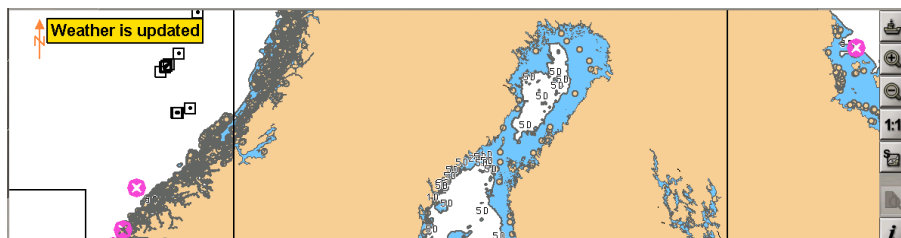
A similar result can be obtained by pressing the  button in the **Route Optimization** group.



The original route which was subjected to optimizing will be automatically deleted from the slot (see previous section *Selecting Route for Voyage*, paragraph *Loading Route to Slot for Voyage 1*). It will be automatically replaced with the optimized route after a press on the **Accept** (  ) button. It will also be automatically loaded in the **Route** task. In this case, it will be associated with a schedule recalculated as a result of optimizing.

To cancel all the optimizing results, press the **Decline** button in the **Optimized Route Details** window or the  button in the **Route Optimization** group.

On the **Optimization** tab, there is an indicator. If the route was not optimized, it is shown in orange; it is also displayed in the orange colour if the weather data is older than 24 hours.



The user is advised about this by an appropriate the indication. The weather is updated for new optimization to be made in line with the changed weather conditions.

If the route is optimized and the current weather data is available, it is shown in green.

## Getting Data for Voyage

In the Ribbon, switch to the **Data** tab.

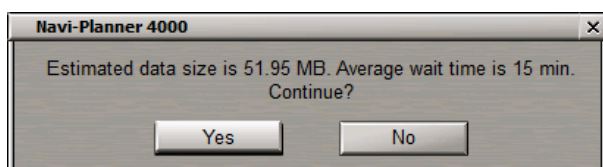


The **State** bar in the **Charts for Voyage** group shows the status of the chart folio for the voyage (**Not downloaded** or **Downloaded**).

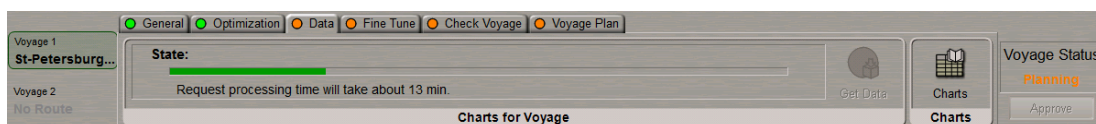
Press the **Get Data** button in the **Charts for Voyage** group.



The program will scan the available data and output the estimated size of data to be downloaded and time it would take to download it.



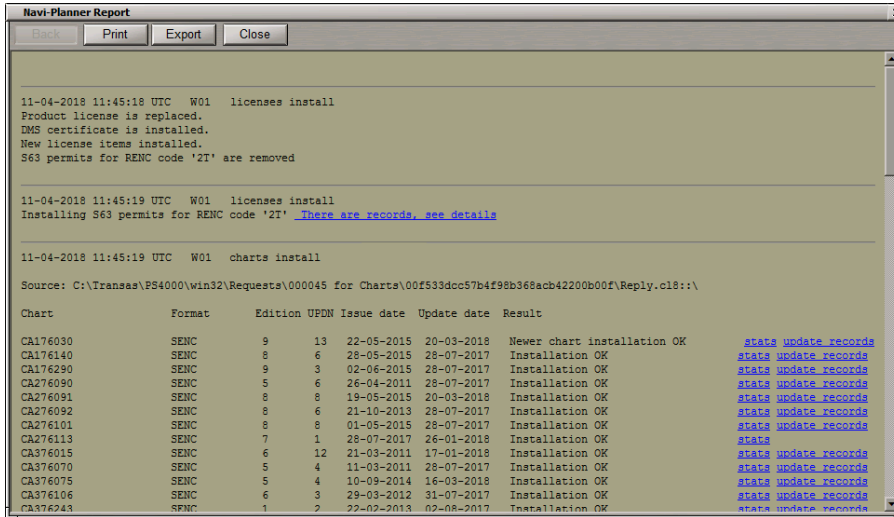
Press the **Yes** button.



A message that the data is ordered will appear. The fact that the data downloading process is underway is indicated by the **State** bar in the **Charts for Voyage** group.

At this time, the **Get Data** button in the **Charts for Voyage** group is disabled.

After the data downloading, it will be automatically installed and an appropriate report is generated:



The **State** bar in the **Charts for Voyage** group will show **Downloaded**.



On the **Data** tab, there is an indicator. It is shown in orange in the following cases:

- Charts are not downloaded;
- Weather data is out of date and should be optimized;
- Charts are not up to date;
- The route geometry has been changed and new charts are required;
- Charts are expired.

If all the data is up to date the indicator light turns to green.

In the Ribbon, press **Charts** button in the **Charts** group.



The bottom part of the screen will display the corresponding table.

Electronic Charts			Paper Charts		
Name	Edition Number (Update Numb...	Updated to	Name	Date of Issue	Last Update
CA176030	9 (13)	WK14-18			
CA176140	8 (6)	WK14-18			
CA276092	8 (6)	WK14-18			
CA276090	5 (6)	WK14-18			
CA276091	8 (8)	WK14-18			
CA276101	8 (8)	WK14-18			
CA376075	5 (4)	WK14-18			
CA376655	2 (8)	WK14-18			
CA376106	6 (3)	WK14-18			
CA376070	5 (4)	WK14-18			

Nautical Publications			
NP	Updated to	Date of Issue	Last Update

The **Charts** table is intended for handling electronic and paper charts and the nautical books used on the route. The **Electronic charts** and **Paper charts** tables are filled in automatically during the data collection procedure.

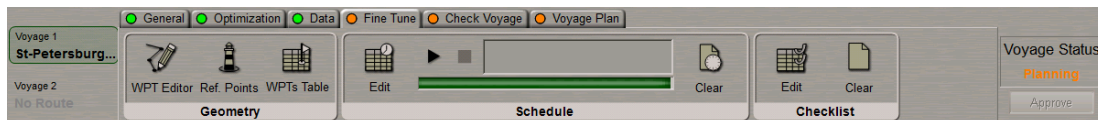


# Fine Tune Voyage



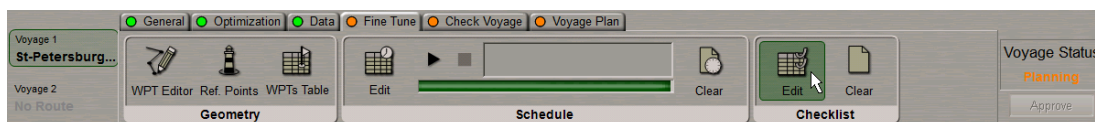
Press the button in the Task Selection Area to switch to the **Voyage** task.

In the Ribbon, switch to the **Fine Tune** tab.



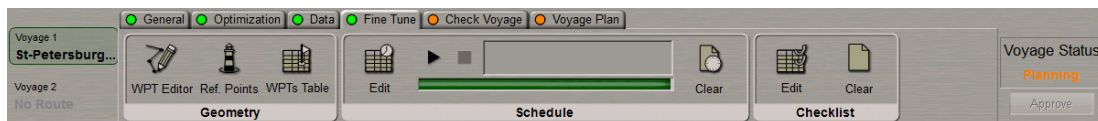
At this stage, edit as required those parameters that were not taken into account during the automatic plotting:

1. Edit the route geometry and elements like XTDs, WPT names, turn radius, etc. E.g., at this stage, the user can delete unnecessary WPT's created during the route optimizing.
  - To edit the route with the aid of the MAN Wpt graphic editor, press the **WPT Editor** button in the **Geometry** group (see *Chapter 2, section Route Editor, paragraph Manual Graphic Route Editing*).
  - To edit reference points, press the **Ref.Points** button in the **Geometry** group (see *Chapter 2, section Route Editor, paragraph Manual Graphic Route Editing*).
  - To edit XTD's, WPT names, turn radius, etc., press the **WPTs Tables** button in the **Geometry** group (see *Chapter 2, section Route Editor, paragraph Tabular Route Editing*).
2. Schedules. To edit a schedule, press the **Edit** button in the **Schedule** group (see *Chapter 2, section Handling Schedules, paragraph Editing a Schedule*).
3. Edit checklists ((see *Chapter 2, section Handling Checklists, paragraph Creating and Saving Checklist*)).



If any WPTs are changed, and the overall length has changed by more than 1% of the whole route, Optimization should be performed another time. This will be indicated in orange on the **Optimization** tab.

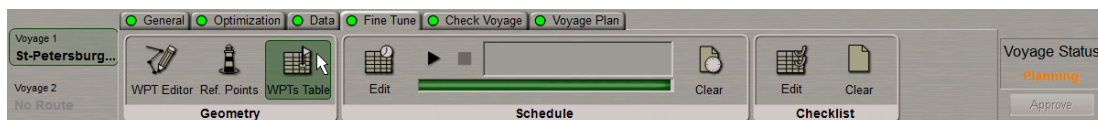
If any WPT is moved so far from the original position that a new chart is required, the indicator in the **Data** tab is highlighted in orange.



On the **Fine Tune** tab, there is an indicator. If no corrections were made, it highlights in orange, if the settings were made, it turns to green.

## UKC Manual Edition

In the Ribbon, switch to **Fine Tune** tab. Press the **WPTs Tables** button in the **Geometry** group.



The bottom part of the screen will display a relevant table. In the **Waypoints** table, double click on the **UKC data** field:

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
18		59° 30.197 N 022° 28.925 E	RL	254.1° 54.69 NM	246.20 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
19		59° 06.225 N 021° 32.243 E	RL	230.4° 37.73 NM	283.93 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	44.0 m	1.0 m	
20		56° 50.508 N 018° 23.220 E	RL	216.5° 169.20 NM	453.13 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
21		56° 03.086 N 016° 31.708 E	RL	232.5° 78.05 NM	531.18 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	4.0	1.0 m	
22		55° 24.958 N 014° 34.237 E	RL	240.1° 76.58 NM	607.76 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
23		55° 04.247 N 014° 04.593 E	RL	219.3° 26.77 NM	634.53 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	24.0 m	1.0 m	
24		54° 48.214 N 012° 44.317 E	RL	250.9° 49.05 NM	683.58 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	11.0 m	1.0 m	
25		54° 36.445 N	RL	235.4°	704.26	0.10 NM	0.30 NM		6.0 m	Undefined	4.0 m	1.0 m	

Enter the necessary value. Press the right or left trackball button. The UKC value can be entered (corrected) manually only if the Voyage Plan is calculated, otherwise the entered value will not be accepted.

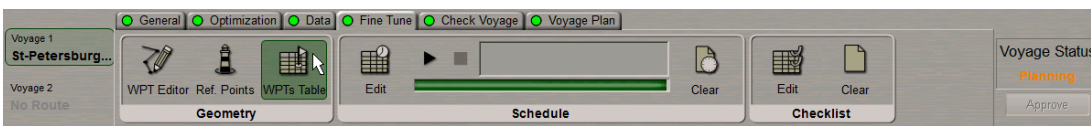
WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
18		59° 30.197 N 022° 28.925 E	RL	254.1° 54.69 NM	246.20 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
19		59° 06.225 N 021° 32.243 E	RL	230.4° 37.73 NM	283.93 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	44.0 m	1.0 m	
20		56° 50.508 N 018° 23.220 E	RL	216.5° 169.20 NM	453.13 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
21		56° 03.086 N 016° 31.708 E	RL	232.5° 78.05 NM	531.18 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	<b>5.0 m manual</b>	1.0 m	
22		55° 24.958 N 014° 34.237 E	RL	240.1° 76.58 NM	607.76 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	14.0 m	1.0 m	
23		55° 04.247 N 014° 04.593 E	RL	219.3° 26.77 NM	634.53 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	24.0 m	1.0 m	
24		54° 48.214 N 012° 44.317 E	RL	250.9° 49.05 NM	683.58 NM	0.10 NM 0.10 NM	0.30 NM		6.0 m	Undefined	11.0 m	1.0 m	
25		54° 36.445 N	RL	235.4°	704.26	0.10 NM	0.30 NM		6.0 m	Undefined	4.0 m	1.0 m	

When the value is changed manually, it is shown in bold italic plus the word "manual" appears underneath the value.

## Work with Reference Points

**ATTENTION!** Reference points are not displayed on the chart unless the scale permits this.

In the Ribbon, switch to the **Fine Tune** tab. Press the **WPTs Tables** button in the **Geometry** group



The bottom part of the screen will display the corresponding table.

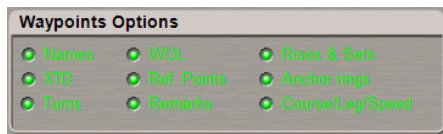
WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
33		55° 10.066 N 011° 03.358 E	RL	005.0° 4.96 NM	793.21 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	10.0 m	5.0 m	
34		55° 12.258 N 011° 06.989 E	RL	038.3° 2.78 NM	795.99 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	10.0 m	5.0 m	
35		55° 13.809 N 011° 06.427 E	RL	000.8° 1.58 NM	797.57 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	
36		55° 18.901 N 011° 02.397 E	RL	335.7° 5.60 NM	803.17 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	9.2 m	5.0 m	
37		55° 22.172 N 011° 02.437 E	RL	000.4° 3.25 NM	806.42 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	10.0 m	5.0 m	70.0 m
38		55° 30.788 N 010° 52.613 E	RL	327.0° 10.34 NM	816.76 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	9.2 m	5.0 m	
39		55° 38.823 N 010° 46.969 E	RL	338.3° 8.62 NM	825.38 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	9.2 m	5.0 m	
40		55° 45.869 N 010° 48.654 E	RL	007.7° 7.19 NM	832.57 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	9.2 m	5.0 m	

The **Waypoints** table contains the following data (columns) on reference points:

- **Ref. point** – reference point name taken from the chart object (if the object has no name, the cell is empty);
- **BRG/Dist** – bearing and distance to the reference point.

Reference points are set automatically during the data collection if the **Ref. points** checkbox is checked before Voyage plan creation (see *Data Collection* paragraph).

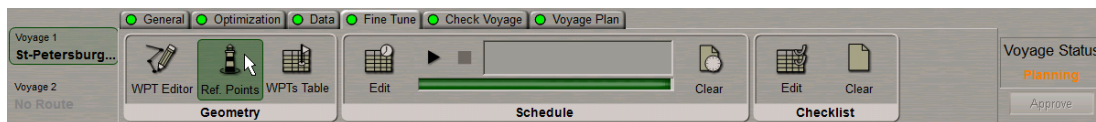
To turn on/off the display of reference points on the Chart Panel, use the **Waypoint Options** group of **Route** page in **Settings** window (see *Chapter 2, section Creating a Route, paragraph Entering Additional Data*).



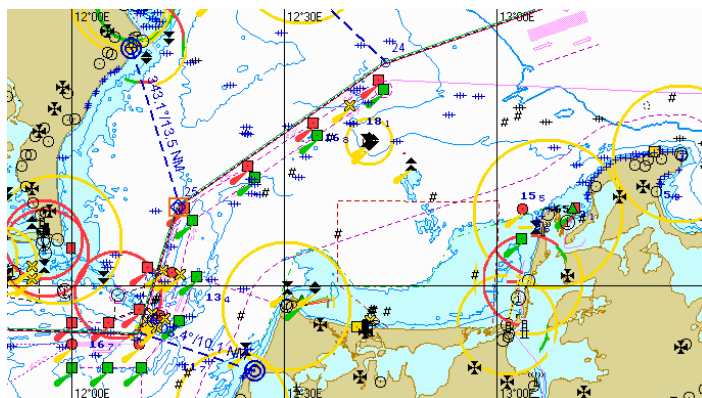
To set or change a reference point, position the cursor on the necessary WPT in the **Waypoints** table and click the left trackball button on the required point.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
23		55° 04.247 N 014° 04.593 E	RL	219.3° 26.77 NM	634.53 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	19.2 m	5.0 m	
24		54° 48.214 N 012° 44.317 E	RL	250.9° 49.05 NM	683.58 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	S
25		54° 36.445 N 012° 14.903 E	RL	295.4° 20.68 NM	704.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	W
26		54° 26.042 N 012° 09.221 E	RL	197.6° 10.80 NM	715.06 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	L
27		54° 26.565 N 011° 44.933 E	RL	272.1° 14.29 NM	729.35 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	L
28		54° 42.015 N 010° 53.688 E	RL	297.4° 33.50 NM	762.85 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	Fi
29		54° 50.290 N 010° 52.457 E	RL	355.1° 8.41 NM	771.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	L
30		54° 54.934 N 010° 54.339 E	RL	013.2° 4.73 NM	775.99 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	5.0 m	5.0 m	L

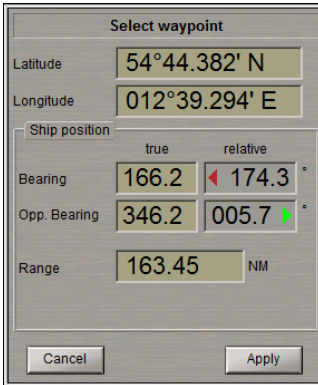
In the Ribbon, press the **Ref.Points** button in the **Geometry** group.



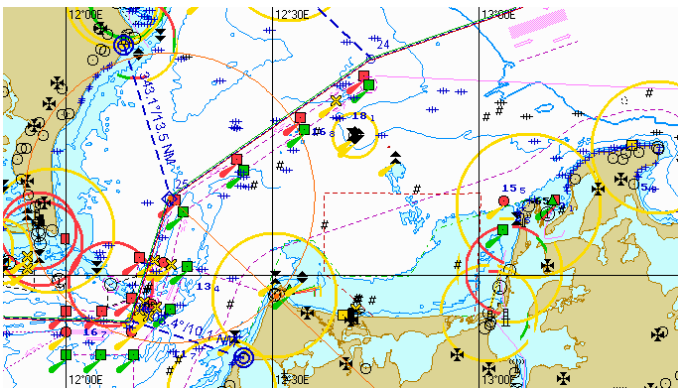
An acquisition marker will appear on the Chart Panel at the selected WPT.



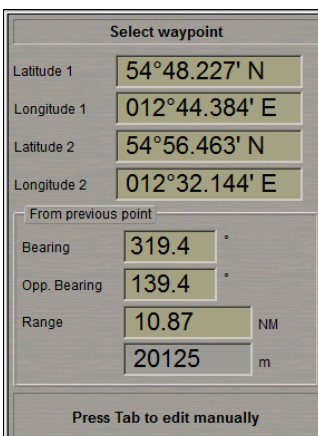
The right-hand part of the screen will display the **Select waypoint** information window showing the acquisition marker coordinates and bearing/distance relative to the WPT.



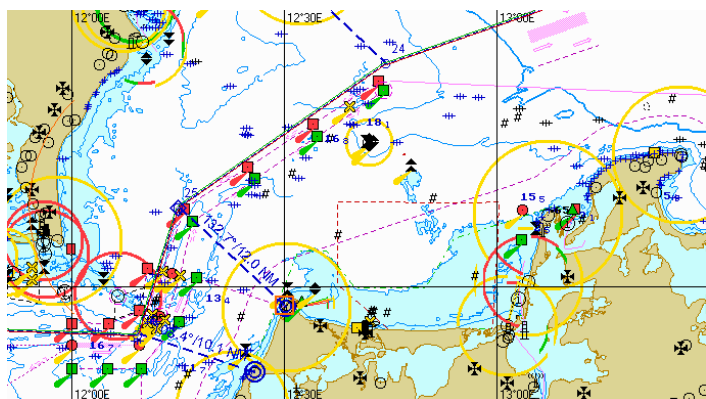
Press the left trackball/mouse button: the marker will acquire the WPT and change its own form to graphic cursor. Position the marker in a new reference point within the displayed Chart Panel. If the **Snap to object** checkbox is checked in the in **Route** page of the **Settings** window (see *Chapter 3*, section *Creating a Route*, paragraph *Default Route Settings*), the reference point will be referenced to the object automatically (if it is not farther than 0.2 mile from the graphic cursor).



The **Select waypoint** information window showing the acquisition marker coordinates and bearing/distance relative to the WPT.



Press the left trackball button.



The reference point will be shown on the Chart Panel in the form of two blue circles. A blue dashed line connects the WPT WOL and its corresponding reference point. The values of bearing/distance to the reference point from the WPT WOL are shown over the line.

The same values are displayed in the table's **BRG/Dist** column.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
23	634.53 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	19.2 m	5.0 m			031.0° 11.57 NM	10.00 m	10.00 m
24	683.58 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	S 78		221.4° 4.66 NM	10.00 m	10.00 m
25	704.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	W 72A		132.7° 11.99 NM	10.00 m	10.00 m
26	715.06 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	Light house		330.8° 3.49 NM	10.00 m	10.00 m
27	729.35 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	Light house		003.6° 4.98 NM	10.00 m	10.00 m
28	762.85 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	Fixed point		042.6° 5.37 NM	10.00 m	10.00 m
29	771.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	Light house		330.3° 2.84 NM	10.00 m	10.00 m
30	775.99 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	5.0 m	5.0 m	Light house		279.3° 2.18 NM	10.00 m	10.00 m

Press the right trackball button to exit from the editing mode. The marker will assume the form of the free cursor.

It is possible to enter the Reference point name manually from the keyboard. Double click on an appropriate cell and enter the name that is needed.

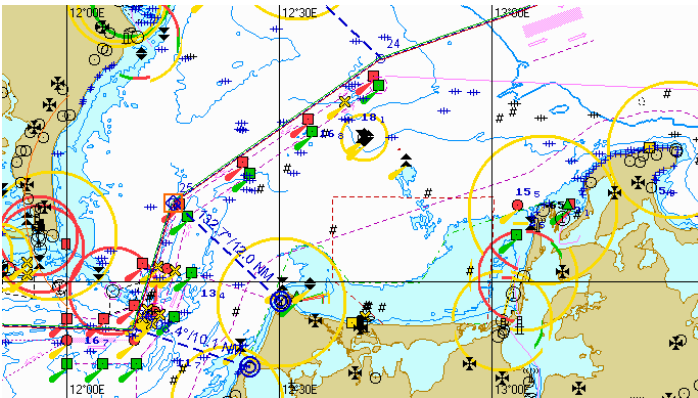
To delete a reference point, position the cursor on the necessary WPT in the **Waypoints** table and press the left trackball button.

WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
23	634.53 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	19.2 m	5.0 m			031.0° 11.57 NM	10.00 m	10.00 m
24	683.58 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	S 78		221.4° 4.66 NM	10.00 m	10.00 m
25	704.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	W 72A		132.7° 11.99 NM	10.00 m	10.00 m
26	715.06 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	Light house		330.8° 3.49 NM	10.00 m	10.00 m
27	729.35 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	6.2 m	5.0 m	Light house		003.6° 4.98 NM	10.00 m	10.00 m
28	762.85 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	Fixed point		042.6° 5.37 NM	10.00 m	10.00 m
29	771.26 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	Shallow water	5.0 m	Light house		330.3° 2.84 NM	10.00 m	10.00 m
30	775.99 NM	0.01 NM 0.01 NM	0.30 NM		10.0 m	0.8 m	5.0 m	5.0 m	Light house		279.3° 2.18 NM	10.00 m	10.00 m

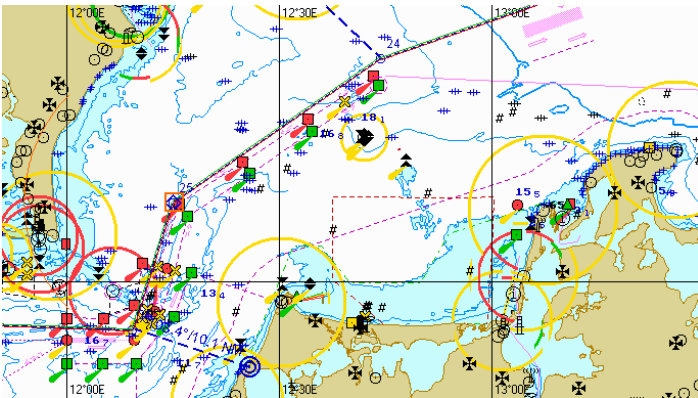
In the Ribbon, press the **Ref.Points** button in the **Geometry** group.



An acquisition marker will appear on the Chart Panel at the selected WPT.



Press the left trackball button: the marker will acquire the WPT and change its own form. Press the right trackball button: the reference point has been deleted.



Press the right trackball button to exit from the editing mode. The marker will assume the form of the free cursor.

## Work with Charts and Publications Used for Voyage

In the Ribbon, press the **Charts** button in the **Charts** group.



The bottom part of the screen will display the corresponding table.

Electronic charts				Paper charts		
Name	Edition number (Update numb...	Updated to	Chart	Name	Date of issue	Last update
a2223_1	7 (47)	VK47-10	TX-97	BA, 2	09-07-2009	03-11-2011
a2223_2	7 (47)	VK47-10	TX-97	BA, 259	28-10-2010	06-10-2011
a2251	5 (47)	VK47-10	TX-97	BA, 266	25-11-2004	10-11-2011
a2361	(47)	VK47-10	TX-97	BA, 267	24-03-2005	27-10-2011
ee4b0805		VK47-10	TX-97	BA, 275	23-12-2004	21-10-2010
a536	8 (21)	VK21-11	TX-97			
22061	(48)	VK47-11	TX-97			
25002	(48)	VK47-11	TX-97			
25002a	(48)	VK47-11	TX-97			
25004	(48)	VK47-11	TX-97			
25006	(48)	VK47-11	TX-97			
27045	(48)	VK47-11	TX-97			

Nautical publications			
NP	Updated to	Date of Issue	Last Update
ADLL AREA 3 - NORTHERN WATERS	9/2014		
ADRS AREA 3 - BALTIC AND NORTHERN WATEF	9/2014		
ATT AREA 1 TO 4 - EUROPE, NORTHERN WATEI			

The **Charts** table is intended for handling electronic and paper charts and nautical books used on the route. The **Electronic charts** and **Paper charts** tables are filled in automatically during the data collection procedure (see section *Voyage Plan Generation*, paragraph *Data Collection*).

The table in the **Electronic charts** group is filled with electronic charts crossed by the route. Entered here are all the charts from the ship collection.

Name	Edition number (Update numb...	Updated to	Chart
a2223_1	7 (47)	WK47-10	TX-97
a2223_2	7 (47)	WK47-10	TX-97
a2251	5 (47)	WK47-10	TX-97
a2361	(47)	WK47-10	TX-97
a536	8 (21)	WK21-11	TX-97
22061	(48)	WK47-11	TX-97
25002	(48)	WK47-11	TX-97
25002a	(48)	WK47-11	TX-97
27045	(48)	WK47-11	TX-97
27047	(48)	WK47-11	TX-97

The table contains the following columns:

- **Name** – chart number;
- **Edition number (Update number)** – chart issue and update numbers;
- **Updated to** – date and ID of a media which was used for the latest updating of TX-97 or SENC chart collection;
- **Chart format**.

The table in the **Paper charts** group is intended for displaying information on paper charts used on the route (for more detailed information on handling paper charts).

Name	Date of issue	Last update
BA, 259	28-10-2010	06-10-2011
BA, 275	23-12-2004	21-10-2010
BA, 938	14-12-2006	20-10-2011
BA, 958	11-05-2006	31-03-2011
BA, 1088	05-02-2009	06-10-2011

The table contains the following columns:

- **Name** – chart number;
- **Date of issue** – the date of chart issue;
- **Last update** – date of the most recent chart updating.

The table can be edited manually:

- position the cursor on **Name** element cell; double click the left trackball button to activate the cell;
- enter the chart name; press <Enter> key;
- position the cursor on **Date of issue** element cell. Double click the left trackball button to activate the cell. By trackball rolling, enter the date of chart issue and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **Last update** element cell. Double click the left trackball button to activate the cell. By trackball rolling, enter the date of chart last update date and press the right trackball button;
- press **Apply** button to confirm the changes you have made.

Name

Name  
2248

Date of issue  
29-04-2008

Date of issue  
29-04-2008

Apply  
Cancel

Last update  
28-12-2008

Last update  
28-12-2008

Apply  
Cancel

The table in the **Nautical publications** group is intended for the display of information on the nautical books, ADP and ports used on the route (for more detailed information on handling the ADP see *Chapter 10*, section *General* and about the ports information see *Chapter 11*.)

NP	Updated to	Date of Issue	Last Update
ADLL AREA 3 - NORTHERN WATERS	9/2014		
ADRS AREA 3 - BALTIC AND NORTHERN WATEF	9/2014		
ATT AREA 1 TO 4 - EUROPE, NORTHERN WATEI			

The table is filled in automatically (ADP and ports only) and can be edited manually:

- position the cursor on **NP** element cell; double click the left trackball button to activate the cell;
- enter the nautical publication name; press <Enter> key;
- position the cursor on **Date of issue** element cell. Double click the left trackball button to activate the cell. By trackball rolling, enter the date of nautical publication issue and press the right trackball button;
- press **Apply** button to confirm the changes you have made;
- position the cursor on **Last update** element cell. Double click the left trackball button to activate the cell. By trackball rolling, enter the date of nautical publication last update date and press the right trackball button;
- press **Apply** button to confirm the changes you have made.

NP
----

NP
Admiralty List of Radio Signals

Last update
28-12-2008

Date of issue
29-04-2008

Apply
Cancel

Last update
28-12-2008

Last update
28-12-20

Apply
Cancel

## Voyage Checking and Editing the Route Taking into Account Dangers to Navigation

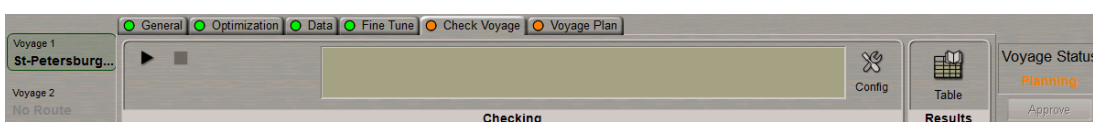
**ATTENTION!** The Navi-Planner 4000 check route functionality is not intended for validation of route for monitoring, it should be noted that a route needs to be validated in the ECDIS before it is set for monitoring.

Press the button in the Task Selection Area to switch to the **Route** task.



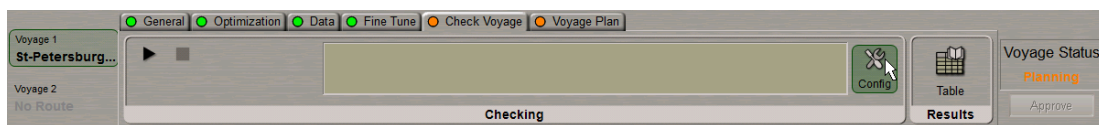
Load the route which should be checked for availability of dangers to navigation (see section *Selecting Route for Voyage*, paragraph *Loading Route to Slot for Voyage 1*).

In the Ribbon, switch to the **Check Voyage** tab.

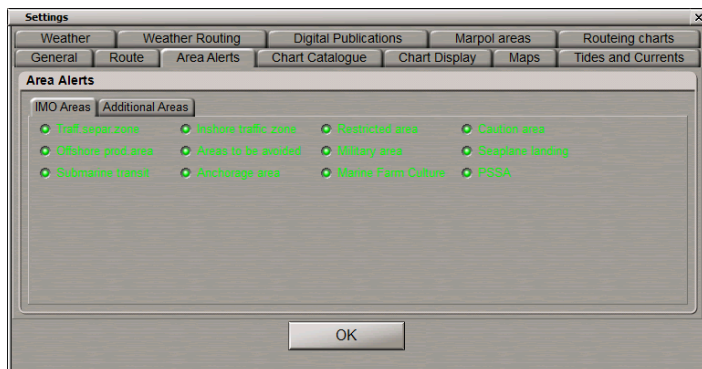




For safety parameters editing press the **Config** button in the **Checking** group.

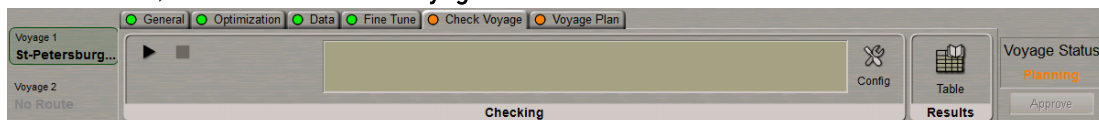


The **Settings** window will open up. Switch to the **Route** page.

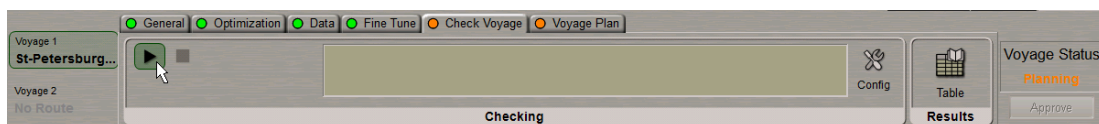



Select (deselect) the IMO Areas and Additional Areas that will be used during the route checking.

In the Ribbon, switch to the **Check Voyage** tab.

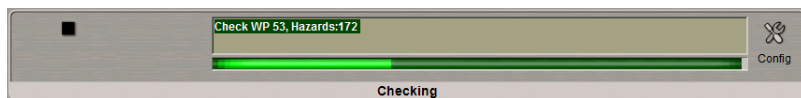


Press the  button in the **Checking** group: the route will be checked.

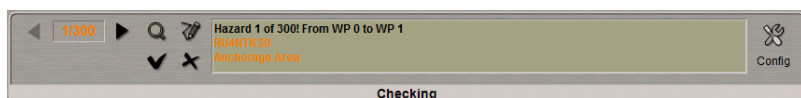


Press the  button if it is necessary to interrupt manually the check of the entire active route for the availability of dangers to navigation.

The check process is shown in the progress bar.

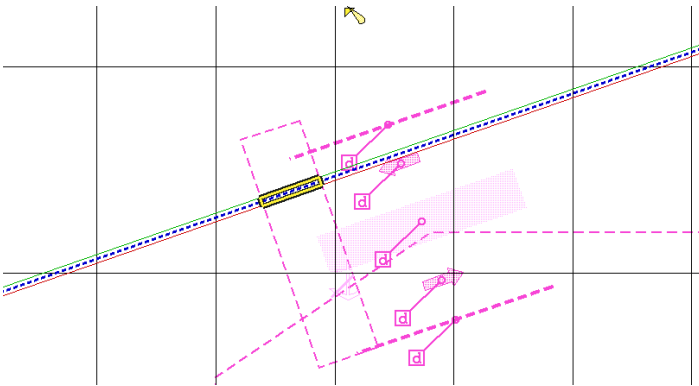





After the end of the check, the **Checking** group will display a message about detected dangers or about no dangers having been found.

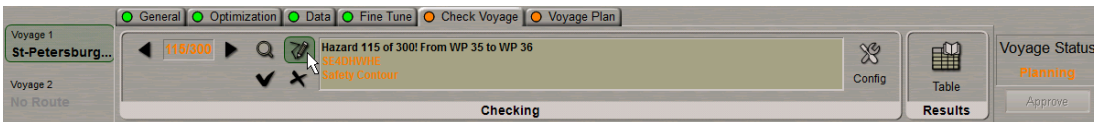


To view the detected dangers to navigation, use the  and  buttons to select the danger you are interested in. Press the  button.

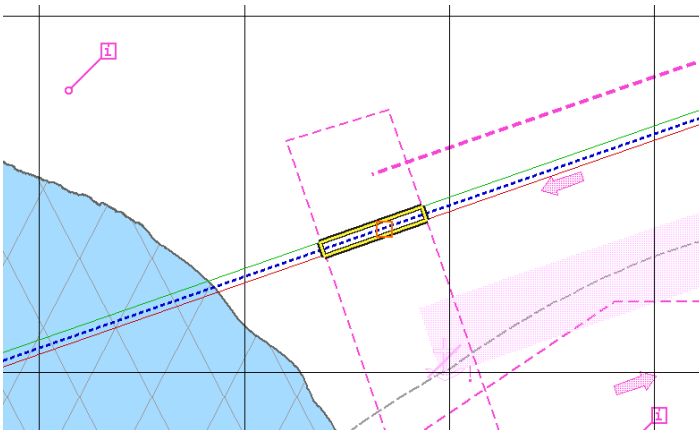
The danger to navigation will be indicated by highlighting on the Chart Panel. In this case, the best chart on the original scale will be loaded.



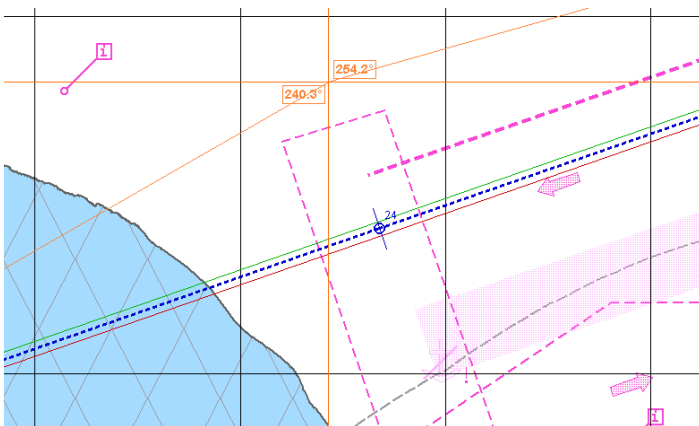
To edit route to take into account the detected dangers to navigation, use the  and  buttons to select the required danger. Switch to **Route Editor** tab and press the  button.



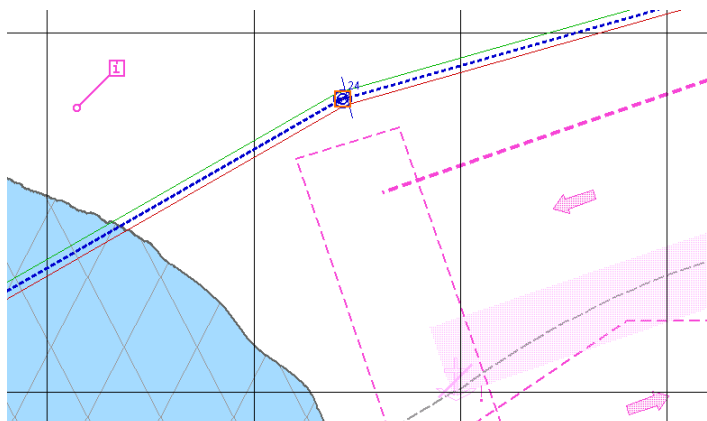
An acquisition marker will appear on the Chart Panel in the point with coordinates of the detected danger to navigation.



Edit the route leg according to the editing rules so that the route leg does not pass through the dangerous place. E.g., change the WPT position.

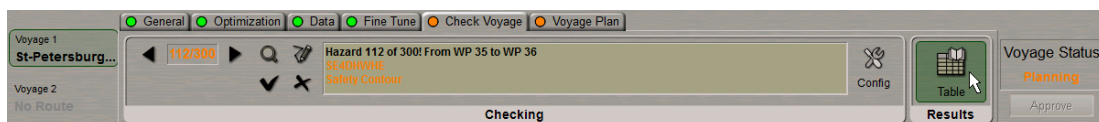


After the route leg editing is completed, press the left trackball button. The edited route legs will be checked, and the next danger to navigation will be backlighted on the Chart Panel.

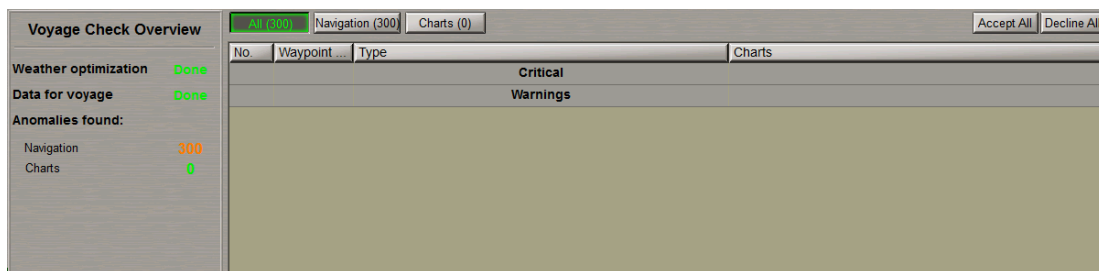


Switch to the **Check Route** tab.

You can also use a table for the display of detected dangers; to this end, press the **Table** button in the **Results** group.



The bottom part of the screen will display the corresponding table.



In the table, the **All** button is pressed by default, so all the detected dangers grouped as **Critical** and **Warnings** will be displayed. The **Critical** group includes dangers which cause the **Safety contour** alarm generation in the ECDIS task. The **Warnings** group includes dangers causing the warnings and cautions generation in the ECDIS task.

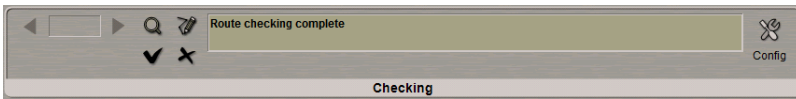
To open a group, double click on its name:





A double left click on the selected alert displays the danger to navigation which caused its generation in the centre of the NPL screen, it will be indicated by highlighting on the Chart Panel. The route can then be edited so as to circumvent the danger as described above.

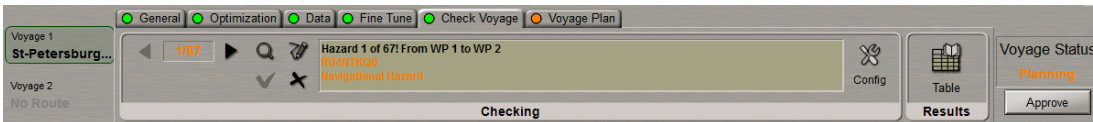
Continue selecting and editing dangers to navigation until the end of the route (see also *Chapter 2, section Route Editor, paragraph Graphic Route Editing Method*).

If there are no dangers to navigation on the route, the **Check Route** group will display an appropriate message.



To exit from checking mode and to accept the route checking results, press the  button (if the dangers table is used, press the **Accept All** button).

To cancel all the checking results, press the  button (if the dangers table is used, press the **Decline All** button).



On the **Check Voyage** tab, there is an indicator. When the route checking results are not accepted by the user, it is highlighted in orange, and green if the results are accepted.

## Voyage Plan Generation

Press the button in the Task Selection Area to switch to the **Voyage** task.



There is a capability to create a voyage automatically using the chart extractions, UKC calculations, tides, currents, weather data, overhead clearance and a collection of charts crossed by the route.

In the Ribbon, switch to the **Voyage Plan** tab.



To create a Voyage Plan, us the following procedure:

- Enter additional information required for creating a Voyage Plan;
- Create a Voyage Plan;
- Edit the Voyage Plan (see section *Fine Tune of Voyage*);
- Print out the Voyage Plan.

## Input of General Voyage Data

In the Ribbon, switch to the **Voyage Plan** tab and press the **Edit Info** button in the **Generation** group .

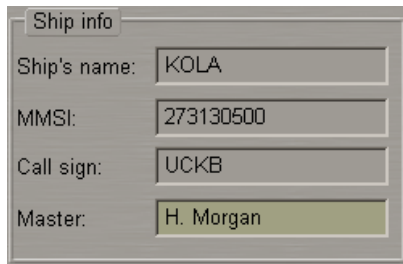


The bottom part of the screen will display the corresponding table.

Ship info	Voyage	Schedule	Distance
Ship's name: KOLA	No.: 12	ETD: 12-12-17 19:00	Total: 6291.05 NM
MMSI: 273130500	From: St-Petersburg	ETA: 31-12-17 09:00	RL distance: 2635.52 NM
Call sign: UCKB	To: New Orleans	Total time: 18 d 14 h 00 min	GC distance: 3655.53 NM
Master: H. Morgan	Via: La-Manche	Average speed: 14.2 kn	
Departure	Arrival	Sailing	
From berth: St-Petersburg 0	From pilotstation: N.Olreans Pilot 64	From pilotstation: Pilot buoy	
To pilotstation: Pilot buoy 5	To berth: Miss. Rvgr Grain Elevat 93	To pilotstation: N.Olreans Pilot	
Distance: 13.84 NM	Distance: 75.30 NM	Distance: 6201.92 NM	
Sailing time: 00 d 00 h 55 min	Sailing time: 00 d 08 h 00 min	Sailing time: 18 d 05 h 04 min	
Draft on departure: 10.0 m	Draft on arrival: 8.0 m	Optimization method:	

The **General Info** table consists of several groups where the general voyage data is specified.

The **Ship info** group is intended for the display of the general ship information entered automatically from the System Configuration utility:

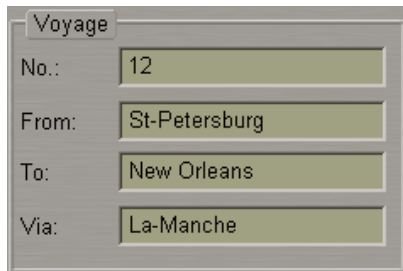


Ship's name:	KOLA
MMSI:	273130500
Call sign:	UCKB
Master:	H. Morgan

- **Ship's name** – name of the ship;
- **MMSI** – ship MMSI number;
- **Call sign** – ship call sign;
- **Master** – ship Master's name.

Use the keyboard to enter manually the Master's name.

The **Voyage** group is intended for entering the general voyage information.

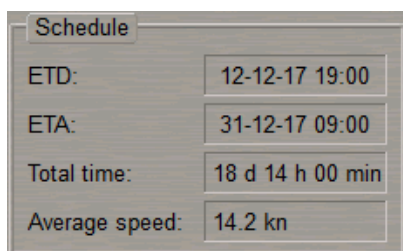


No.:	12
From:	St-Petersburg
To:	New Orleans
Via:	La-Manche

Use the keyboard to enter information in the relevant input boxes:

- **No.** – voyage number;
- **From** – port of departure;
- **To** – port of destination;
- **Via** – location through which the route is plotted.

The **Schedule** group is intended for the display of the general schedule information which is taken from the loaded schedule:



ETD:	12-12-17 19:00
ETA:	31-12-17 09:00
Total time:	18 d 14 h 00 min
Average speed:	14.2 kn

- **ETD** – estimated time of departure;
- **ETA** – estimated time of arrival;
- **Total time** – summary route time the average speed taken into account;
- **Average speed** – average speed on the entire route.

The **Distance** group is intended for the display of general information on the distance to be covered which is taken from the loaded route:

Distance

Total: 6284.96 NM

RL distance: 2635.83 NM

GC distance: 3649.14 NM

- **Total** – total distance of the entire route;
- **RL distance** – route rhumb line distance;
- **GC distance** – route Great Circle distance.

The **Departure** group is intended for the display of general information on the port of departure. From the loaded route WPT listboxes, select:

Departure

From berth: St-Petersburg

To pilotstation: Pilot buoy

Distance: 13.92 NM

Sailing time: 00 d 01 h 18 m

Draft on departure: 10 m

0 - St-Petersburg

1 - < no name >

2 - < no name >

3 - < no name >

4 - < no name >

5 - Pilot buoy

6 - < no name >

7 - < no name >

8 - < no name >

9 - < no name >

- **From berth** – “from the berth” WPT;
- **To pilotstation** – “dropping the pilot” WPT.

The following values are entered automatically from the loaded route and schedule:

- **Distance** – distance between two selected **From berth** and **To pilotstation** WPT's;
- **Sailing time** – time en route between two selected **From berth** and **To pilotstation** WPT's.

In the **Draft on departure** field, enter the ship draft at the time of departure.

The **Arrival** group is intended for the display of general information on the arrival at the port of destination. From the loaded route WPT listboxes, select:

Arrival

From pilotstation: N.Oleams Pilot

To berth: Miss. River Grain Elevat

Distance: 75.32 NM

Sailing time: 00 d 06 h 47 m

Draft on arrival: 8 m

56 - < no name >

57 - < no name >

58 - < no name >

59 - < no name >

60 - < no name >

61 - < no name >

62 - < no name >

63 - N.Oleams Pilot

64 - < no name >

65 - < no name >

- **From pilotstation** – “take pilot on board” WPT;
- **To berth** – “to the berth” WPT.

The following values are entered automatically from the loaded route and schedule:

- **Distance** – distance between two selected **From pilotstation** and **To berth** WPT's;
- **Sailing time** – time en route between two selected **From pilotstation** and **To berth** WPT's.

Use the **Draft on arrival** input box to enter the ship draft at the time of arrival.

The **Sailing** group is intended for the display of information on the sailing between points selected from the **From pilotstation** and **To pilotstation** listboxes in the **Departure** and **Arrival** groups, which is taken from the loaded route and schedule:

Sailing

From pilotstation: Pilot buoy

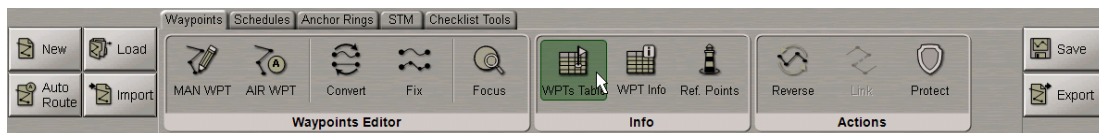
To pilotstation: N.Olreans Pilot

Distance: 6195.72 NM

Sailing time: 24 d 16 h 53 m

- **From pilotstation** – WPT of dropping the pilot during the departure;
- **To pilotstation** – WPT of taking the pilot on board during the arrival;
- **Distance** – distance between the **From pilotstation** and **To pilotstation** WPT's;
- **Sailing time** – time en route between the **From pilotstation** and **To pilotstation** WPT's.

In the Ribbon, switch to the **Waypoints** tab and press the **WPTs Table** button in the **Info** group .



The bottom part of the screen will display the corresponding table.

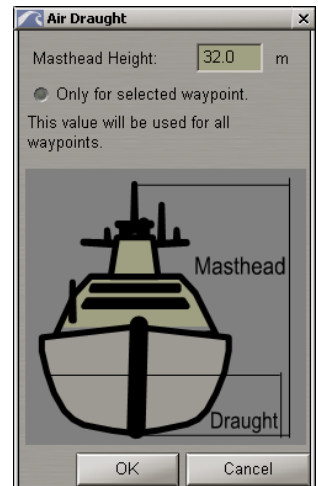
WPT	Name	Position	Leg Type	Leg	Total Distance	X PORT X STBD	Turn Radius	Remarks	Draught	Squat	UKC	Masthead	Overhead Clearance
0		59° 53.635 N 030° 13.243 E	XX	XXX.X XXX.X	XXX.X	XXX.X XXX.X	XXX.X		XXX.X	XXX.X	XXX.X	XXX.X	XXX.X
1		59° 53.292 N 030° 12.754 E	RL	215.6° 0.27 NM	0.27 NM	0.10 NM 0.10 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
2		59° 53.281 N 030° 11.957 E	RL	268.4° 0.49 NM	0.77 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
3		59° 53.119 N 030° 10.756 E	RL	255.0° 0.56 NM	1.33 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
4		59° 56.852 N 029° 52.510 E	RL	292.2° 10.01 NM	11.34 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
5		59° 57.756 N 029° 47.762 E	RL	290.8° 2.50 NM	13.84 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
6		59° 58.845 N 029° 45.408 E	RL	312.7° 1.60 NM	15.43 NM	0.01 NM 0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined
7		59° 59.094 N	RL	286.5°	16.36 NM	0.01 NM	0.30 NM		Undefined	Undefined	Undefined	Undefined	Undefined

For input of the additional data, perform the procedures detailed below:

- position the cursor on the **Draught** element cell; double click the left trackball button to activate the cell;
- enter the draught value on the route leg; press the left trackball button;
- position the cursor on the **Squat** element cell; double click the left trackball button to activate the cell;
- enter the squat value for the vessel on the route leg; press the left trackball button.



- position the cursor on the **Masthead** element cell; double click the left trackball button to activate the cell;



- Use the **Masthead Height** input box to enter the mast height from the keel to the masthead. By default, these values will be used for all the table cells. If the mast height is a variable value, check the **Only for selected waypoint** checkbox. In this case you will have to fill in the cells for each route leg. Press the **OK** button.



The following formula will be used for calculating the Overhead Clearance:

$$\text{Overhead Clearance} = H_B - (\text{Masthead Height} - \text{Draught}),$$

where:

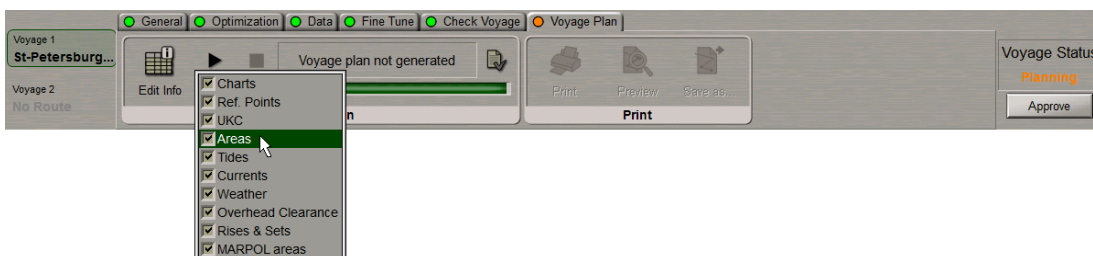
$H_B$  – chart object's vertical clearance.

The Overhead Clearance will be calculated for the following chart objects:

- bridges;
- cables;
- conveyors;
- pipeline.

## Data Collection

In the Ribbon, press the  button in the **Generation** group .

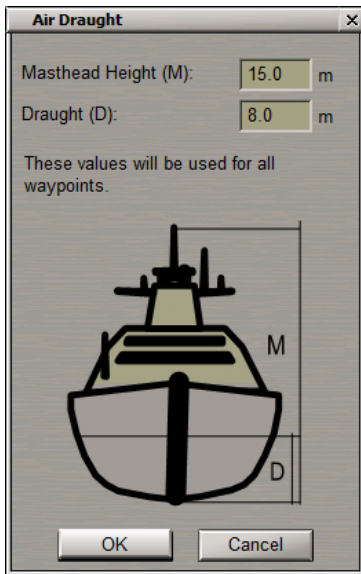


In the drop-down list uncheck checkboxes for those data categories which should not be included in the Voyage Plan (by default, all the data is included).

Press the  button in the **Data Collection** group: the selected data will be collected.




Use the **Air Draught** window which will open to enter (correct) the masthead height and draught. The entered values will be used for all route legs.



Press the **OK** button. If you press the **Cancel** button, values from the table will be used for each route leg.



If necessary to interrupt manually the data collection, press the  button.



After the data collection is completed, buttons will be enabled in the **Print** group (see below paragraph *Voyage Plan Print Preview, Printing and Saving*).

To preview a Voyage Plan press the **Preview** button (see paragraph *Voyage Plan Print Preview and Printing*).

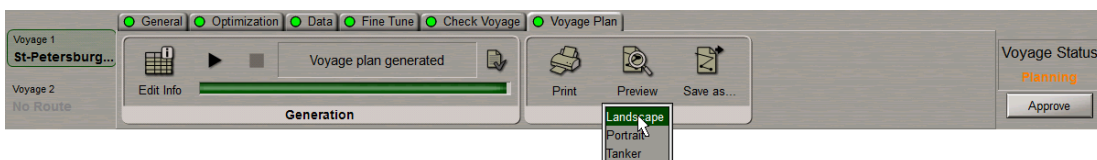
On the **Voyage Plan** tab, there is an indicator. Before the voyage plan is created, its light is orange, after the voyage plan creation, it turns to green.

## Voyage Plan Print Preview and Printing

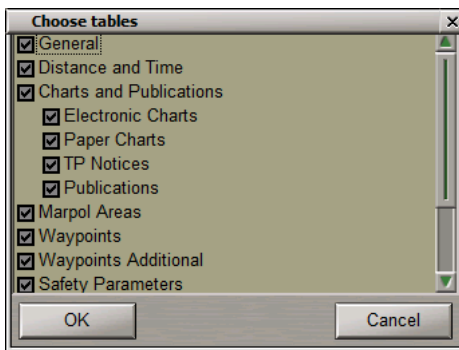
In the Ribbon, press the **Preview** button in the **Print** group.



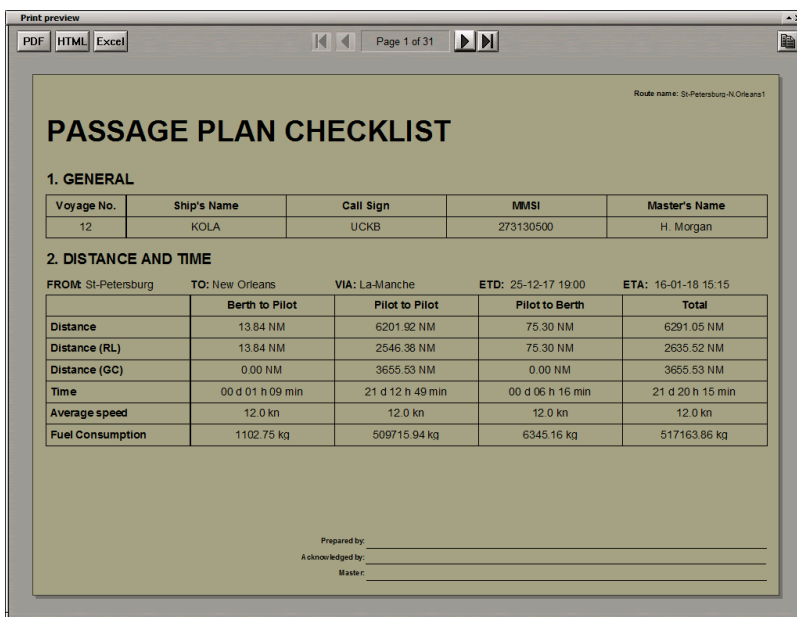
From the drop-down list select the page layout.



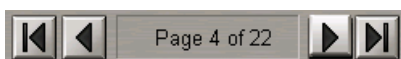
Check checkboxes next to the voyage plan tables which should be printed out.



Press the **OK** button.



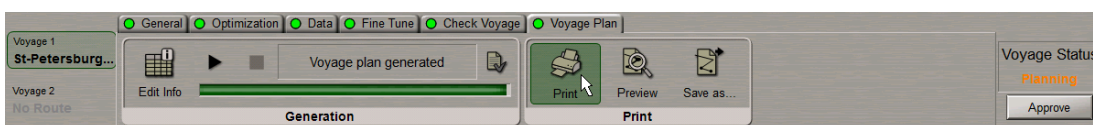
For the preview of the Voyage Plan pages, use the following buttons:



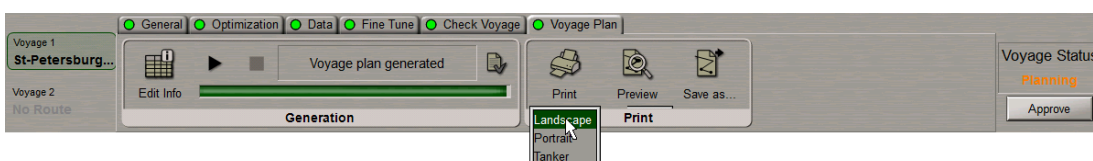
Close the **Print Preview** window.

**ATTENTION!** Check that the printer is connected to the computer on which the Navi-Planner 4000 is installed.

In the Ribbon, press the **Print** button in the **Print** group.

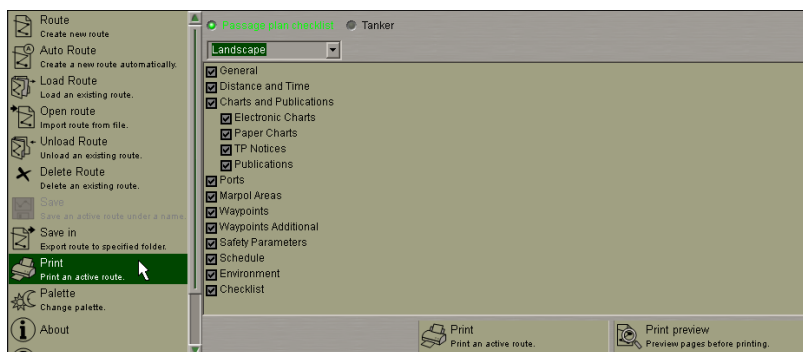


From the drop-down list select the page layout.

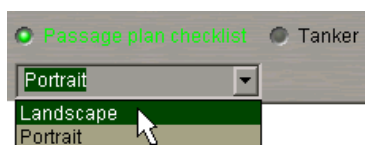


The Voyage Plan will be printed out.

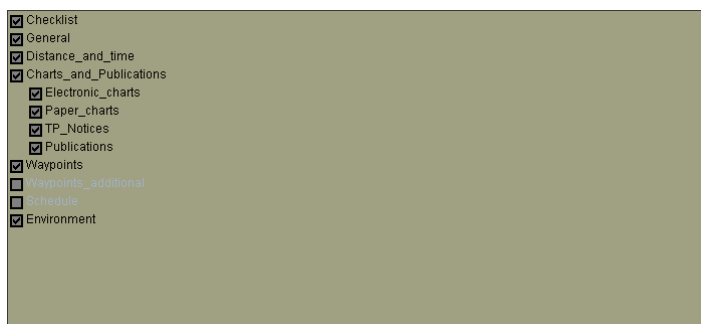
A similar result can be obtained by using the . Select **Print** item from the drop-down menu.



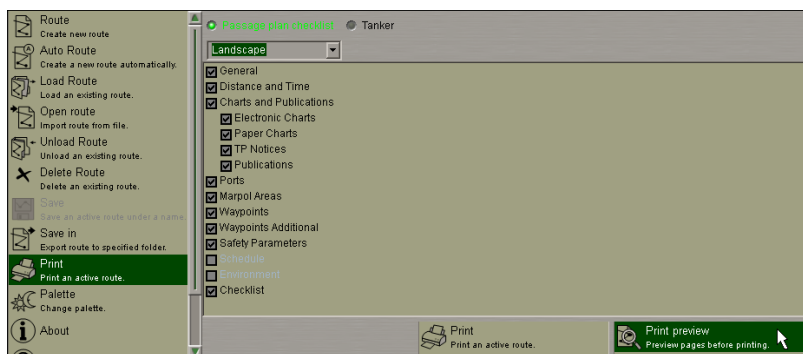
In the right-hand part of the menu, **Passage plan** checklist is selected by default. If necessary, select the **Tanker** template (special custom template). From the drop-down list select the page layout.



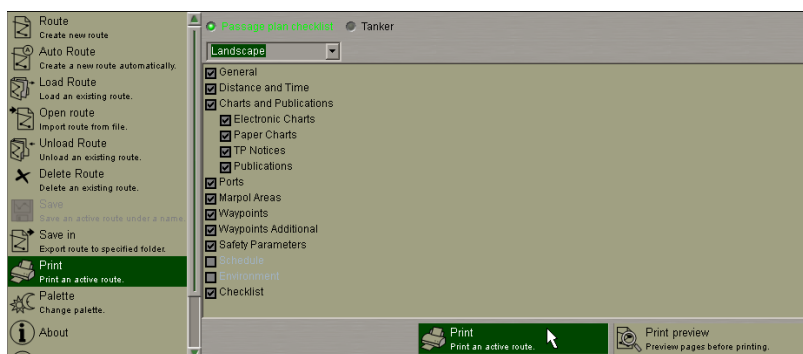
Check checkboxes next to the voyage plan tables which should be printed out.



In the right-hand part of the menu, select the **Print preview** item and press the left trackball button.



In the right-hand part of the menu, select **Print** item and press the left trackball button.



## Voyage Approval

Press the button in the Task Selection Area to switch to the **Voyage** task.

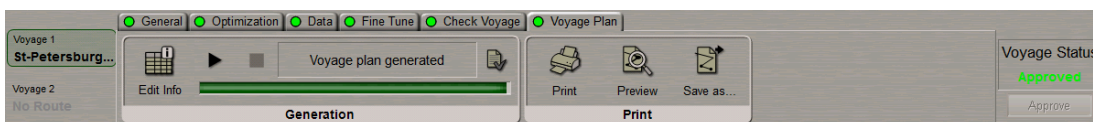


Make final voyage corrections as described in sections *Optimization of Voyage in View of Weather Forecast*, *Fine Tune of Voyage* and *Voyage Plan Generation*.

In the right part of the Ribbon, the **Approve** button will be enabled.



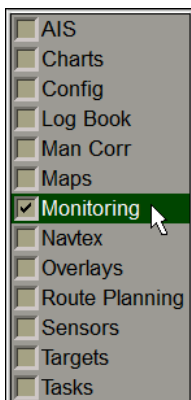
Press the **Approve** button. If the **Approve** button is pressed, it means confirmation of the order and saving of the route to the internal database, where the route can be used in the ECDIS task.



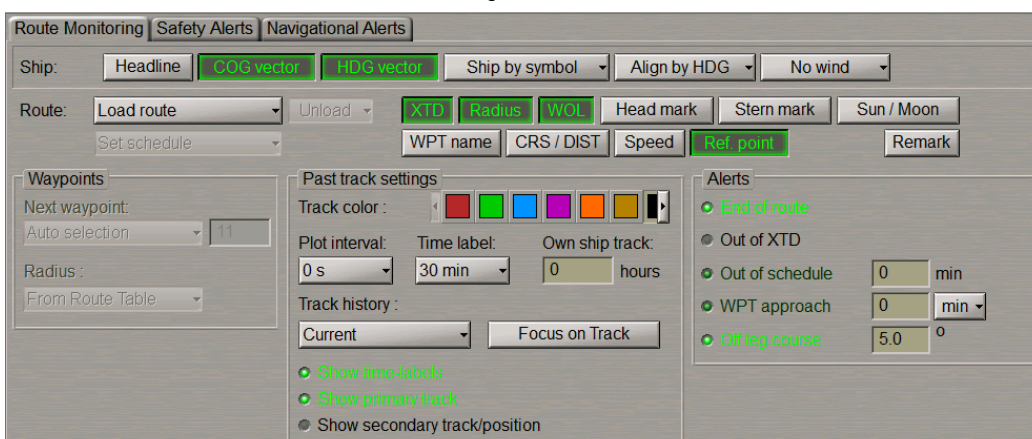
After a while, the route status in the **Voyage Status** group will become "Approved".

## Loading Voyage for Monitoring

Open the **Monitoring** panel by selecting the appropriate line of **Tasks List** menu in the tabs zone of the ECDIS task screen.

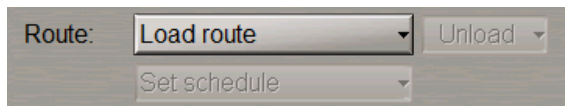


Use the tab in the top part of the **Monitoring** panel, which will open up, to switch to the **Route Monitoring** page:

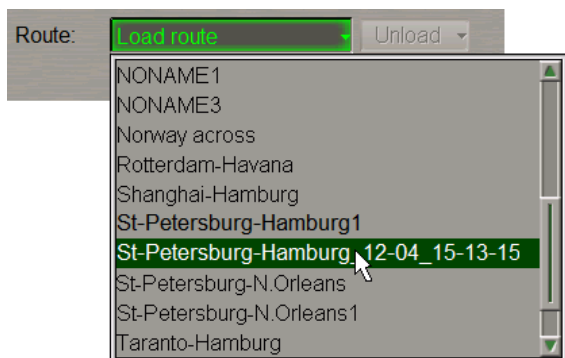


The **Route** group enables loading and unloading of monitored routes and schedule by using the following buttons:

- **Load route** – to select and load a route from the offered list;
- **Set schedule** – to select and load a schedule for the loaded route from the offered list;
- **Unload** – to unload the previously loaded route and/or schedule.



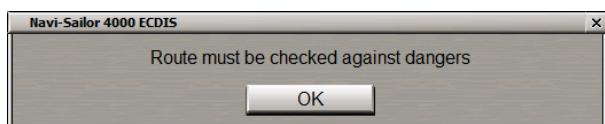
Press the **Load route** button in the **Route** row of buttons.



Select the required route and press the left trackball button.

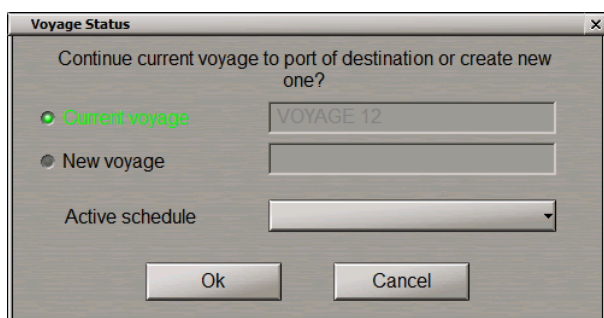
According to the standard, the route which is being loaded for monitoring, is required to be checked for dangers to navigation. By default, the user will be unable to load an unchecked route. This function can be disabled (e.g., for the ECS) in the **INS** panel's **General** page in the System Configuration utility at the system setup stage (see document *Multifunctional Display. (v. 3.01.350). Installation Guide, Chapter 2, section MFD Configuration, paragraph MFD Settings, item 2*). An exception is made for the SAR routes, which can be loaded without a check (see document *Multifunctional Display. (v. 3.01.350). User Manual, Chapter 4, section Search and Rescue Operations, paragraph Creating SAR Routes*).

If the route which is being loaded has not been checked for dangers to navigation, a relevant message will be provided:



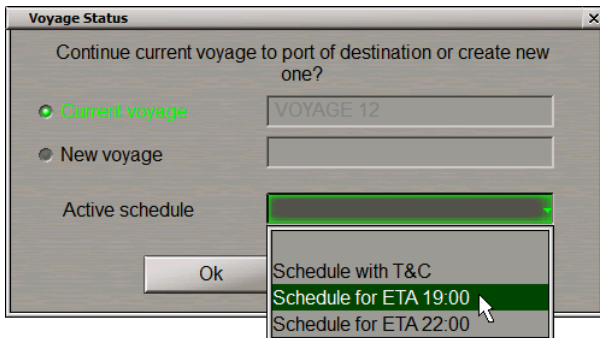
Press the **OK** button and check the route for dangers to navigation (see document *Multifunctional Display. (v. 3.01.350). User Manual, Chapter 9, section Work with Route, paragraph Checking and Editing the Route Taking into Account Dangers to Navigation*).

If the route has been checked for dangers to navigation, the **Voyage Status** window will appear.

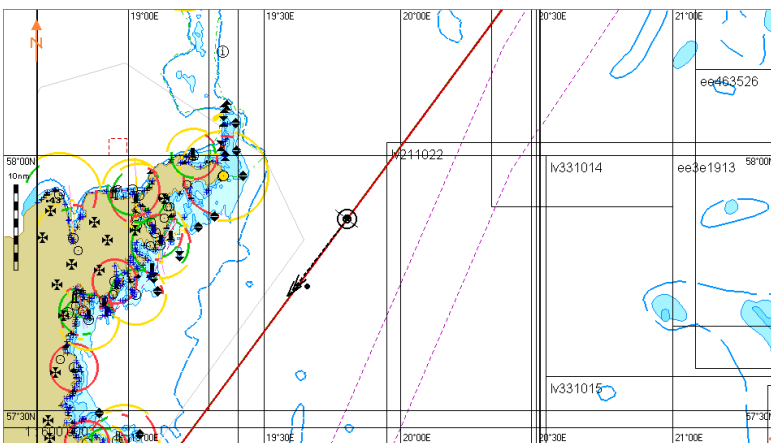


In the **Voyage Status** window, the current voyage is selected by default (the **Current Voyage** checkbox is checked). The voyage is understood as a route with a schedule including the departure and arrival time/date currently fulfilled between two consecutive ports without stops, berth to berth.

Check the **New voyage** checkbox if the route loaded for monitoring refers to a new voyage. In the input box to the right of the checkbox enter the new voyage name. In this case, it is also advisable to update a record on a new voyage in the ship log, since this is not done automatically (see *Chapter 6*, section *Using Ship Logbook*, paragraph *Separating Voyages*).



From the **Active schedule** drop-down list, select the necessary schedule which will be loaded along with the route. Press the **Ok** button. The selected route will be loaded for sailing on the Chart panel, and its name will be displayed on the button.

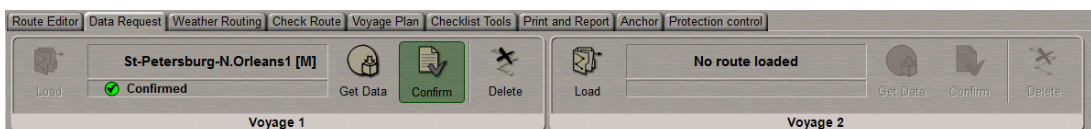


Open Navi-Planner 4000 application.

Press the button in the Task Selection Area to switch to the **Voyage** task..

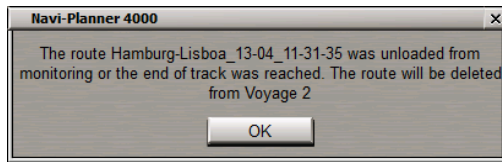


In the Ribbon, switch to the **General** tab.



The letter "[M]" will be added to its name. If the route length is long, a hint with the letter "[M]" will be displayed.

If the route is unloaded from monitoring in the ECDSI task, the Navi-Planner 4000 application will display the following warning on the screen:



Press the **OK** button. The route will be deleted from the slot.

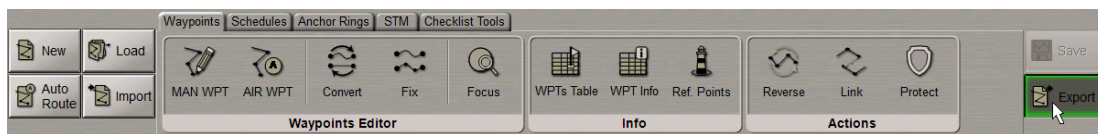
## Additional Features

Press the button in the Task Selection Area to switch to the **Route** task.

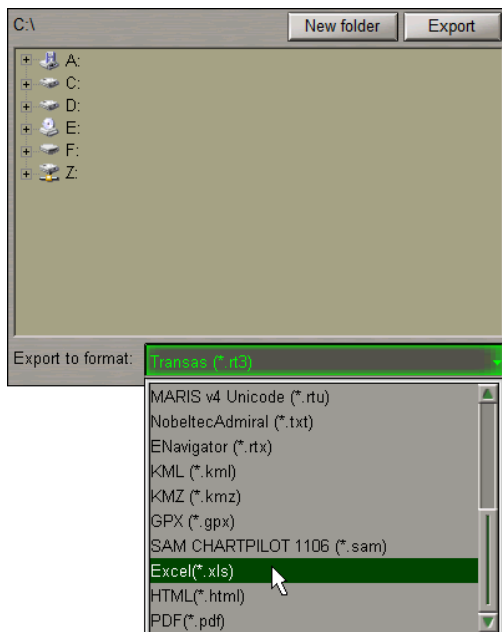


## Exporting Voyage Plan and Route to Various Formats

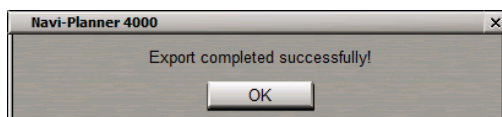
Load the route, which should be converted to Excel format (see *Chapter 3, Route Loading and Unloading* section). In the right part of the Ribbon press the **Export** button.



Press **Export to format** button and from the drop-down list select the necessary format.



Browse the folder where the route file will be saved and press **Export** button.



Press **OK** button.

It is possible to export route to the following formats:

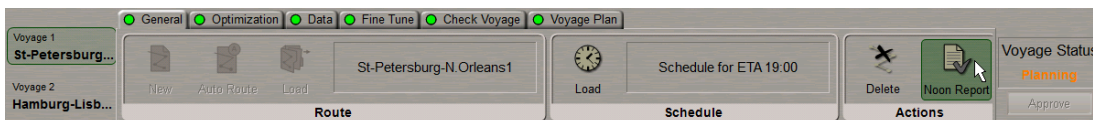
- Transas (\*.rt3);
- Transas exchange (\*.rt4);
- Route exchange RTZ 1.0 (\*.rtz);
- Route exchange RTZ 1.1 (\*.rtz);
- Route exchange (\*.rtzp);
- Bon Voyage System (\*.bvs);
- Furuno (\*.txt);
- JRC (\*.csv);
- Hagenuk (\*.txt);
- CMapECS (\*.route);
- Sperry (\*.vp);
- Kongsberg (\*.rut);
- MARIS v3 (\*.rou);
- MARIS v4 Unicode (\*.rtu);
- NobeltecAdmiral (\*.txt);
- ENavigator (\*.rtx);
- KML (\*.kml);
- KMZ (\*.kmz);
- GPX (\*.gpx);
- SAM CHARTPILOT 1106 (\*.sam);
- SAM Electronics (\*.xml);
- ENSI (\*.xml);
- Jeppesen (\*.route);
- OSI (\*.rte);
- Excel (\*.xls);
- HTML(\*.html);
- PDF (\*.pdf).

## Noon Report Creation

Press the button in the Task Selection Area to switch to the **Voyage** task.



In the Ribbon switch to **General** tab and press the **Noon Report** button in **Actions** group.

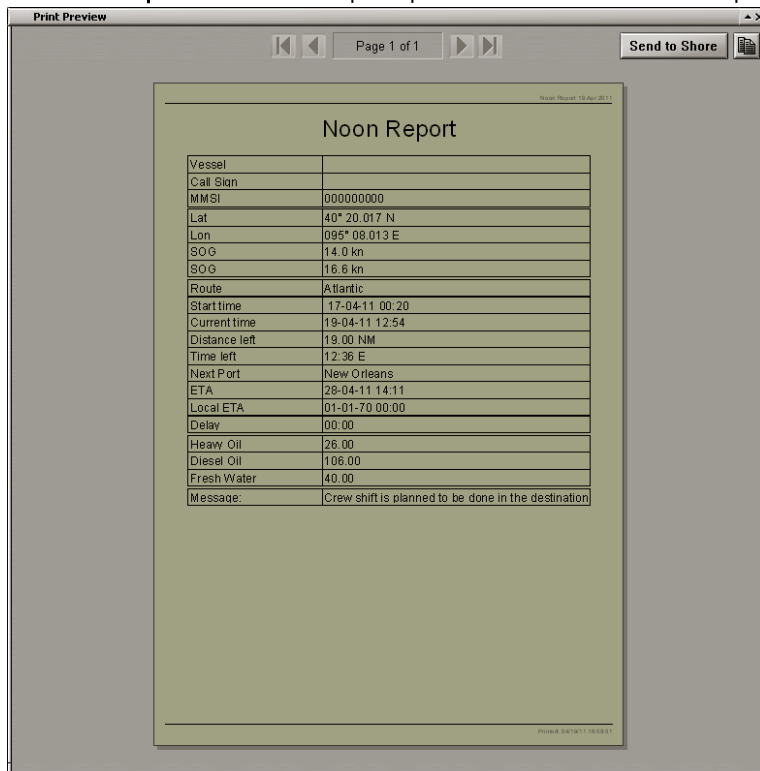


On the appeared window fill the fields that are allowed to do so.

Press **Send to shore** button to send the noon report to the shore.

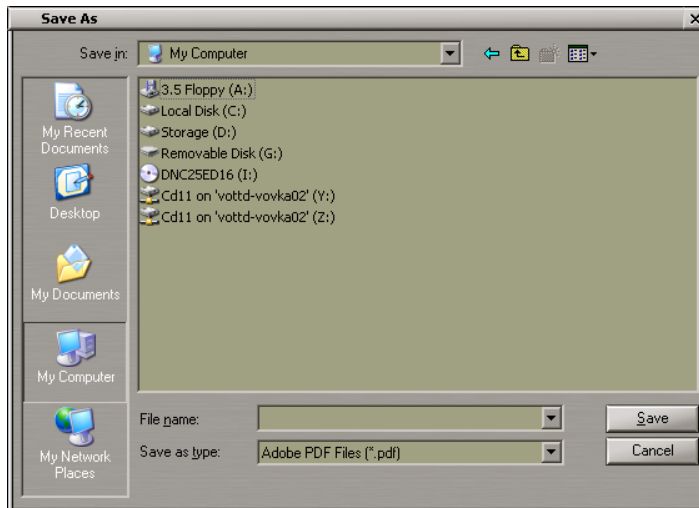


Press **Print preview** button to print preview the created noon report.



Press **Print** button to print the noon report.

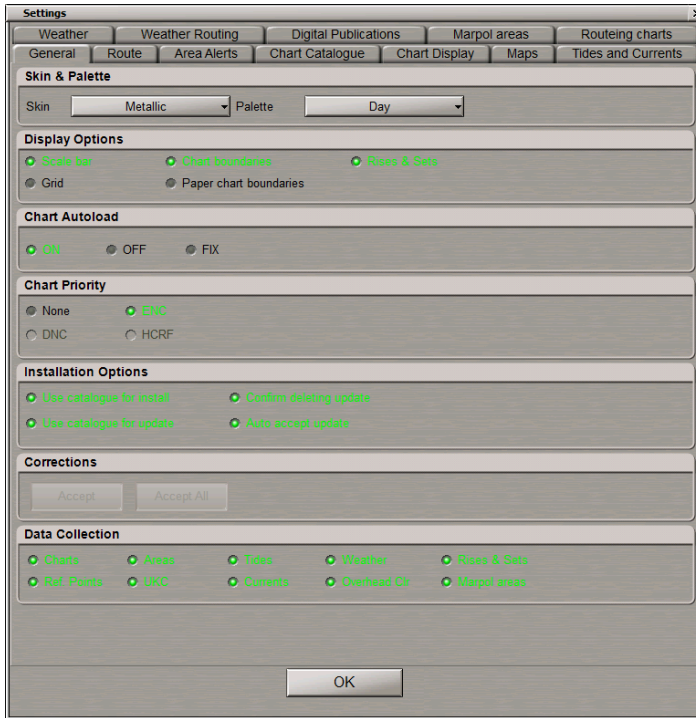
Press **Save As** button to save the created noon report:



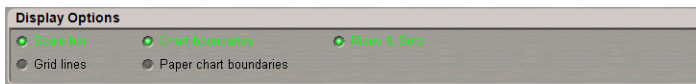
Browse the folder where the noon report will be saved and press **Save** button. Noon report will be saved in PDF format.

## Obtaining Information on Sun/Moon on the Route

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **General** page.



Check **Rises&Sets** checkbox in **Display Options** group:

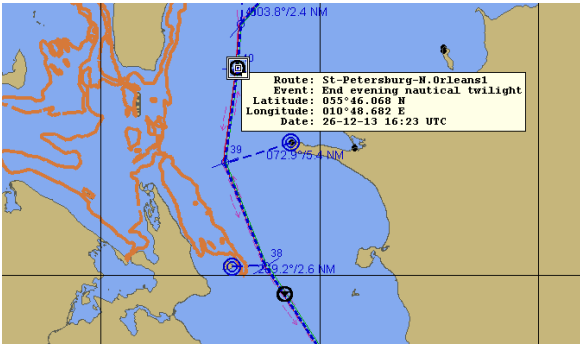


For this functionality to operate it is necessary that a schedule be drawn for the route and that during the voyage plan creating the **Rises&Sets** checkbox be checked (see the previous paragraph).

After the voyage plan has been created, the chart panel will show the route with symbols of the sunrise/sunset and moonrise/moonset.



Position the free **View** cursor on the necessary symbol; the cursor will change its form.



Press the left trackball button: the data card will display the calculated data: sunrise/sunset and moonrise/moonset, coordinates, date of passing this point on the route.

# Charts and Chart Information

This chapter describes the procedure used during the operation with charts and chart information.

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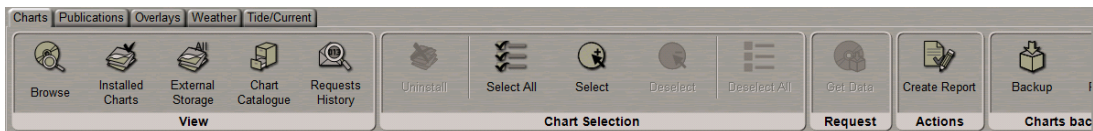
# Chart Selection

## Selecting Collection

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon switch to **Charts** tab.



Select the chart collection which you will be working with. To do this, in the Ribbon press the following buttons in the **View** group:

- **Installed Charts** – to work with the already installed ship collection charts;
- **External Storage** – to work with charts contained in the external storage;
- **Chart Catalogue** – to work with various catalogues which are used for ordering new charts, licenses, updates, etc.;
- **Requests History** – to work with old orders.

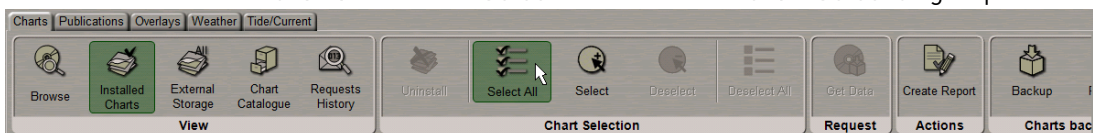


After the collection has been selected, the list of charts it contains is displayed in the form of a table in the bottom part of the Navi-Planner 4000 screen, whereas the Chart Panel shows outlines of charts included in the collection.

## Selecting/Deselecting All Charts

Select the collection.

In the Ribbon switch to **Charts** tab. Press **Select All** button in the **Chart Selection** group.



Outlines of selected charts are shown in the red coloured dashed line.

If some number of charts has already been selected and it is necessary to cancel their selection, press the **Deselect All** button in the **Chart Selection** group.

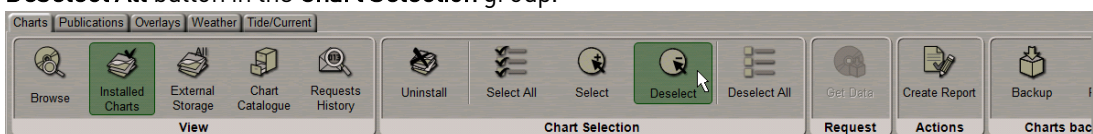
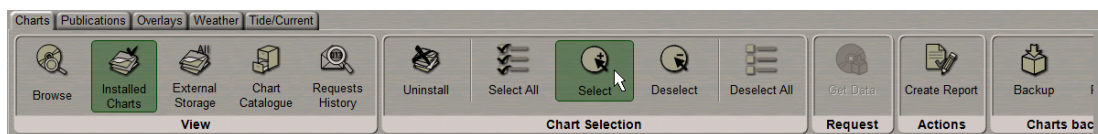


Chart selection/deselection is synchronised on the Chart Panel and in the tables in the bottom part of the Navi-Planner 4000 screen.

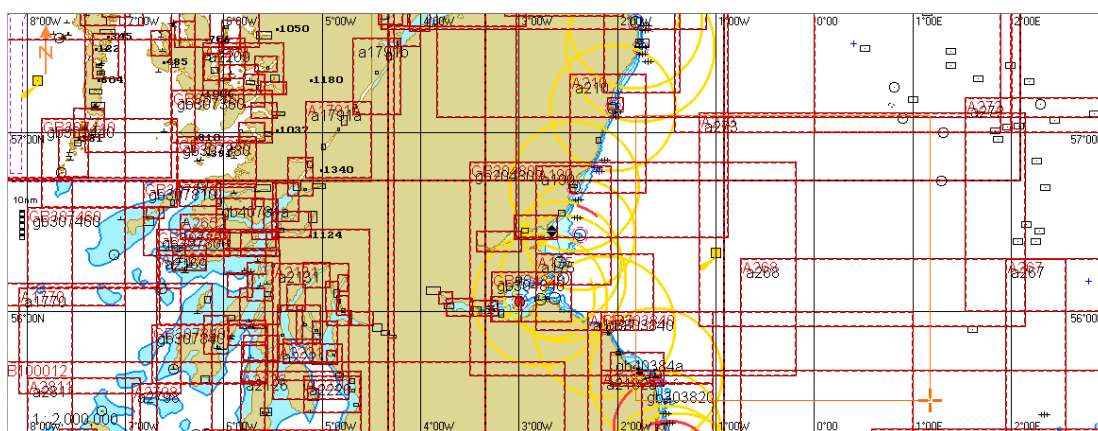
## Selecting Chart by Cursor

Select the collection.

In the Ribbon switch to **Charts** tab. Press **Select** button in **Chart Selection** group.

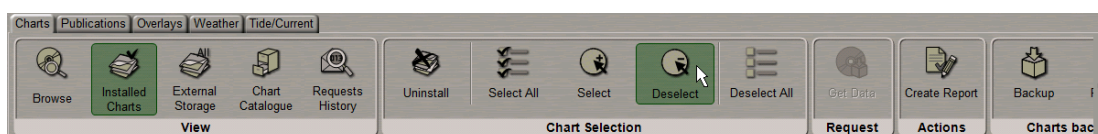


The graphic cursor will appear on the Chart Panel. By keeping the left trackball button depressed, set the sailing area on the Chart Display Area, which charts are required to be installed for.



Press left trackball button. Outlines of charts, which fall within the set area, are shown in the red coloured dashed line.

If some number of charts has already been selected and it is necessary to cancel several charts selection by cursor, press the **Deselect** button in the **Chart Selection** group.



The graphic cursor will appear on the Chart Panel. Keeping the left trackball button depressed, set the sailing area on the Chart Display Area, which the charts selection should be cancelled for. Press left trackball button. Outlines of charts, which fall within the set area, are shown in the black coloured line.

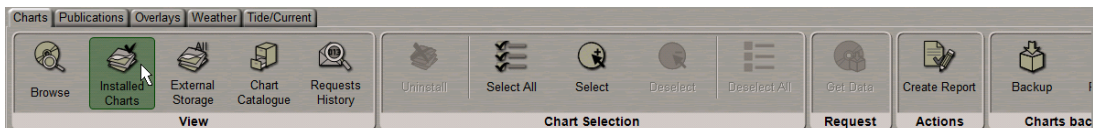
Chart selection/deselection on the Chart Panel and in the tables in the bottom part of the Navi-Planner 4000 screen is synchronised.

## Selecting Chart from Table

Open the **Installed charts** table by pressing the button in the left part of the Navi-Planner 4000 screen.



In the Ribbon switch to **Charts** tab and press **Installed Charts** button in **View** group.



The bottom part of the screen will display the corresponding table.

In table select the necessary charts by keeping <Ctrl> key depressed. To select several charts in a row, specify the first and the last chart keeping <Shift> key depressed.

Name	Scale	Last update	Updated to	Expires	Format	Status
<input type="checkbox"/> a2399	1 : 25,000	23-02-2012	WK08-12		TX-97	Licensed
<input type="checkbox"/> a2399a	1 : 10,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2399b	1 : 10,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2399c	1 : 10,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2420	1 : 150,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2423	1 : 150,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2424	1 : 150,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2451	1 : 150,000	23-02-2012	WK08-12		TX-97	Licensed
<input checked="" type="checkbox"/> a2474c	1 : 25,000	23-02-2012	WK08-12		TX-97	Licensed
<input type="checkbox"/> a2474e	1 : 10,000	23-02-2012	WK08-12		TX-97	Licensed
<input type="checkbox"/> a2476c	1 : 15,000	23-02-2012	WK08-12		TX-97	Licensed

The selected charts will be displayed against the coloured background. After the chart selection, it is necessary to check a checkbox next to the name of any selected chart; checkboxes for other selected charts will be checked automatically. Chart selection is completed.

Chart selection in the table and on the Chart Panel is synchronised.

For chart selection from chart catalog see section *Data Ordering*.

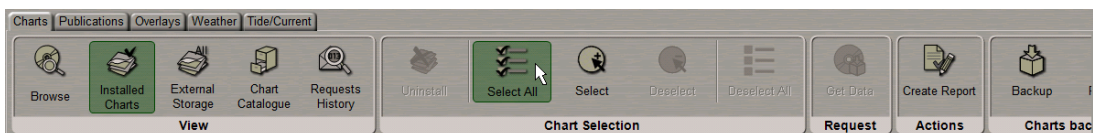
## Data Ordering

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



## Loading Chart Catalogue

In the Ribbon switch to **Charts** tab and press **Chart Catalogue** button in the **View** group.



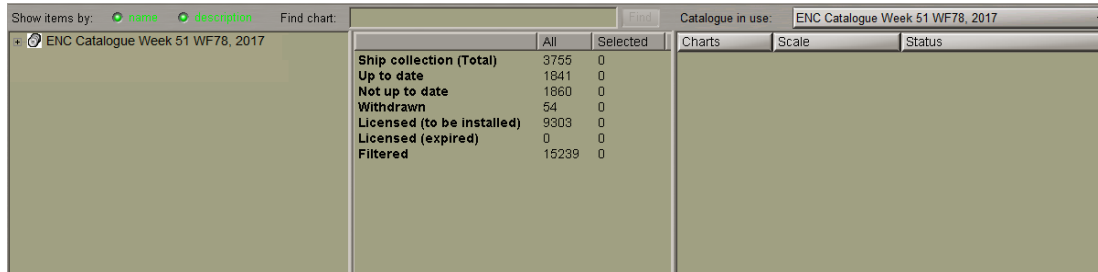
The bottom part of the screen will display the corresponding table.

Ship collection (Total)	All	Selected	Charts	Scale	Status
Up to date	0	0			
Not up to date	0	0			
Withdrawn	0	0			
Licensed (to be installed)	0	0			
Licensed (expired)	0	0			
Filtered	0	0			

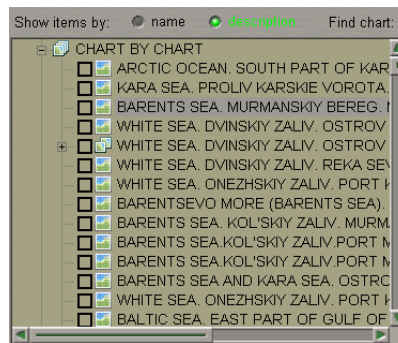
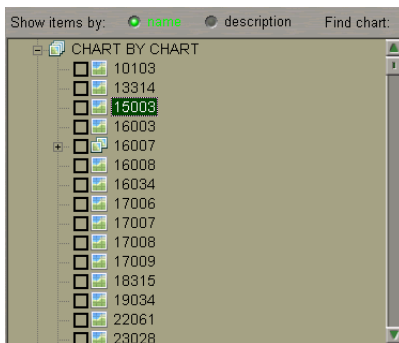
Press **Current catalogue** button in the top right corner of the table and select the necessary catalog from the drop-down list.



The selected catalog will be loaded.



In the left part of this table, the chart catalog is present in the form of a "tree". Press **description** radio button in **Show item by** row to display chart names with descriptions.



In the central part is displayed information about loaded chart catalog:

- **Ship collection (Total)** – the total number of cells available in the SENC for the content selected for the report (either full or filtered by the route);
- **Up to date** – the total number of cells (for the content selected) which have the "Up to date" status<sup>1</sup>;
- **Not up to date** – the total number of cells (for the content selected) which have the "Not up to date" status<sup>1</sup>;
- **Withdrawn** – the total number of cells (for the content selected) which have the "Withdrawn" status<sup>1</sup>;
- **Licensed (to be installed)** – number of charts, licensed but not yet installed;
- **Licensed (expired)** – number of all expired charts;
- **Filtered** – number of active format charts selected with a filter from the installed catalogue (chart boundaries are shown in Chart Display Area).

	All	Selected
Ship collection (Total)	3755	150
Up to date	1841	135
Not up to date	1860	15
Withdrawn	54	0
Licensed (to be installed)	9303	13
Licensed (expired)	0	0
Filtered	15239	163

<sup>1</sup>For the status description see *Chapter 11, section Chart Status Summary*.



In the right part of the table is displayed the following information about selected charts:

- **Chart** – chart name;
- **Scale** – chart scale;
- **Status** – chart status.

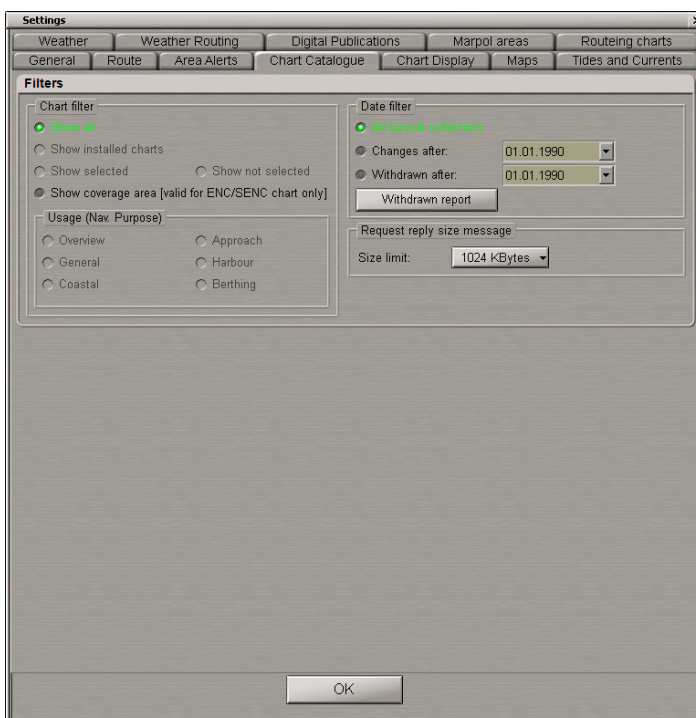
Charts	Scale	Status
FI29GOFW	1 : 180,000	Licensed
FI4EIHMF	1 : 22,000	Not Licensed
FI4EIHMG	1 : 22,000	Not Licensed
DE110000	1 : 1,500,000	Licensed

If you want prompt search the chart in the loaded Catalog, type the number or the first characters of a chart in the input field, and press **Find** button.

Find chart:

## Using Filter for Obtaining Information and Selecting Charts

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Chart Catalog** page.



If it is necessary to use the filter for obtaining information and selecting charts press the following buttons in **Filters** group:

- **Show all** – to display all the charts from the selected catalogue folder;
- **Show installed charts** – to display charts from the ship collection;
- **Show selected** – to display selected charts;
- **Show not selected** – to show all the unselected charts;
- **Show coverage area** – to display areas covered with SENC chart data (valid for ENC/SENC charts only);

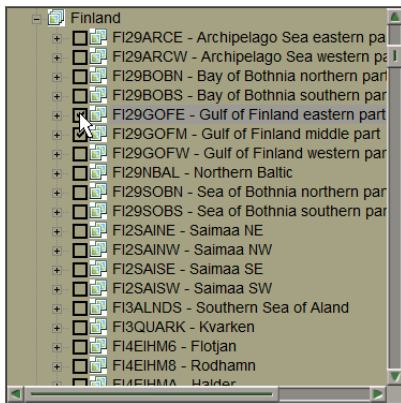
- **Usage (Nav. Purpose)** – to display charts with the certain navigational purpose:
  - **Overview** – is for overview charts with scales ranging from 1:1,500,001 or smaller;
  - **General** – is for general charts with scales ranging from 1:600,001 - 1:1,500,000;
  - **Coastal** – is for coastal charts with scales ranging from 1:150,001 - 1:600,000;
  - **Approach** – is for approach charts with scales ranging from 1:50,001 - 1:150,000;
  - **Harbour** – is for harbour charts with scales ranging from 1:25,000 – 1:50,000;
  - **Berthing** – is for berthing charts with scales ranging from 1:24,999 or larger.

In addition to the settings already made, if it is necessary to select charts according to the dates, check the following checkboxes in **Date filter** group:

- **All (actual collection)** – to display all the charts of the collection;
- **Changes after** – to display charts issued for the first time and charts whose new editions have appeared, or which have been updated after the specified date;
- **Withdrawn after** – to display the charts removed from the collection after the specified date.

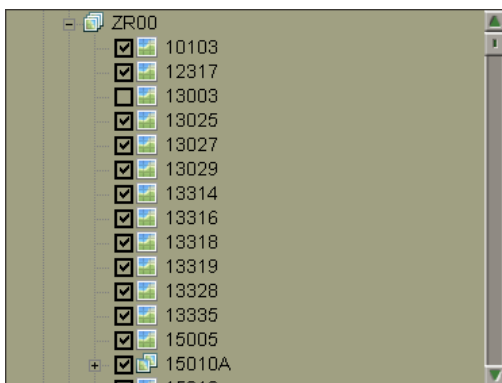
## Selecting Charts in Chart Catalogue Panel

Open the necessary folder in the catalogue tree.



Check the checkboxes next to the charts you need to select.

To select charts, open folders or chart folios containing charts. Check the checkboxes next to the names of charts, which should be selected.



## Ordering Charts

**ATTENTION!** The main chart ordering procedure is described in the previous chapter (see *Chapter 3*, section *Getting Data for Voyage*). The Navi-Planner 4000 has an option enabling single SENC format charts to be ordered additionally.

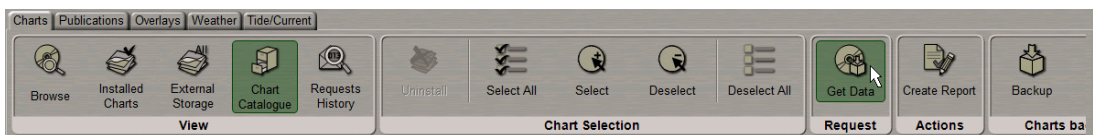
In the Ribbon switch to **Charts** tab.

Load the SENC format chart catalogue and select the necessary charts. The procedure for selecting charts is similar to the procedure described in the section *Chart Selection*, paragraph *Selecting Chart by Cursor*.

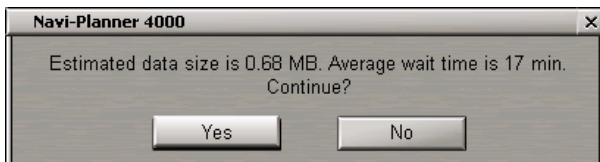
After the chart selection, the **Get Data** button in the **Request** group will be enabled.

**NOTE:** Another necessary condition for the **Get Data** button to be enabled is absence of a route in both route selection slots in the Ribbon of the **Voyage** task. (see *Chapter 3*, section *Selecting Route for Voyage*, paragraph *Loading Route to Slot for Voyage 1*)

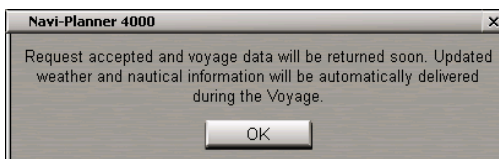
Press the **Get Data** button.



The program will scan the available data and output the estimated size of data to be downloaded and time it would take to download it.

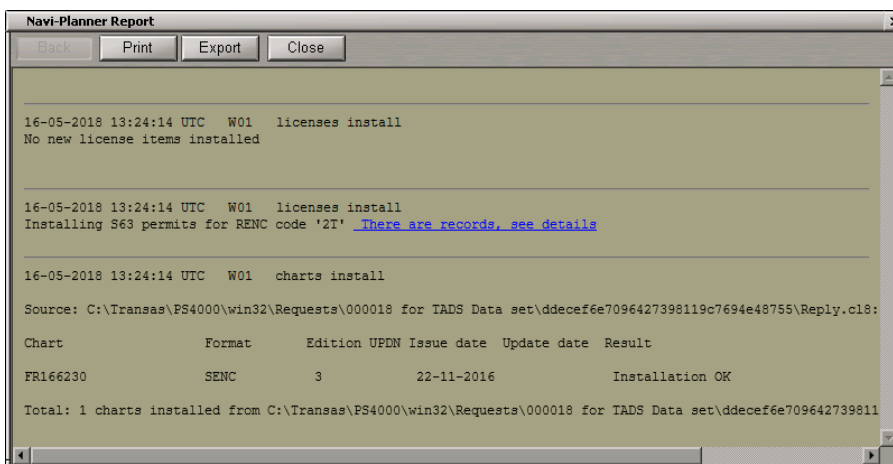


Press the **Yes** button.



Press **OK** button.

After the data downloading, it will be automatically installed and an appropriate report is generated:



## Orders Traffic

If an order was sent by using the Advanced Data Delivery tool, it is not necessary to do anything. A reply sent by the Transas Chart Server will be processed and installed by Navi-Planner 4000 automatically.

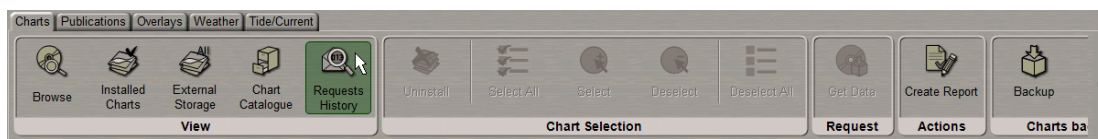
Perform the installation of received data as described in *Installing All Data* paragraph.

## Handling Old Orders

In the left part of the Navi-Planner 4000 screen, press the **History** button to display the corresponding table.



In the Ribbon switch to **Charts** tab. Press **Requests History** button in the **View** group.



The bottom part of the screen will display the corresponding table.

Request	Issue Date	Complete Date	Status	Chart Server Message	Charts
				Error: All ordered items are already licensed or requested items are not found. Update your license by sending "Full license" request or ask Transas to send your up to date license with usual e-mail.	CA4001 CA4003 CA4012 CA4013 CA4045 CA4047 CA4049 CA4099 CA4255 CA4817 CA4844 CA5001
000006 for TADS Data Set	18-12-2017 17:32	18-12-2017 17:35	Received		
000007 for ADP Data Updates	18-12-2017 17:32	18-12-2017 17:35	Received	Your ADP service is not valid now. Please contact your distributor to prolong the service.	
000008 for ADP Data License	18-12-2017 17:32		Awaiting approval	Your order has been received and is waiting for approval	
000009 for Weather	18-12-2017 17:32	18-12-2017 17:35	Received		
000010 for TADS Charts	19-12-2017 10:58	19-12-2017 11:04	Received		DE110000
000012 for TADS Data Set	19-12-2017 10:58	19-12-2017 11:03	Received		DK1NORSO
000015 for Weather	19-12-2017 10:58	19-12-2017 11:03	Received		DK2BORNH
000016 for Full License	19-12-2017 11:12	19-12-2017 11:14	Received		DK2KATGN
000017 for TADS Charts	19-12-2017 11:19	19-12-2017 11:26	Received		DK2KATGS
000019 for TADS Data Set	19-12-2017 11:19	19-12-2017 11:26	Received		
000022 for Weather	19-12-2017 11:19	19-12-2017 11:25	Received		

Table with orders made, which includes the following columns:

- **Request** – name of the order which includes its number, date, order formation time and the type of ordered data;
- **Issue date** – order formation date;
- **Complete date** – order reception date;
- **Status** – order status;
- **Chart Server message** – service messages on the Chart Server order processing.

Old requests may have the following status specified in the table column with the same name:

- **Created** – the order was formed but has not been sent, and has been stored in an external storage;
- **Sent** – the order has been sent;
- **Acknowledged** – the order has been received by the chart server and is being processed;
- **Awaiting approval** – the order is awaiting its approval;
- **Refused** – the order cannot be processed by the chart server and is, therefore, rejected;
- **Received** – an answer containing the requested data has been received;
- **Failed** – the order has not been sent.

Depending on situation, service messages from the Chart Server may have the following form:

CASE	MESSAGE
Chart ordering: If ordered charts are already sold, Chart Server [CS] informs about it;	All ordered items have been already sold to the customer or requested items are not found
Charts ordering: If there is no autoapproval, CS informs that the order has been received and awaiting for approval;	Your chart order has been received by the Transas Chart Server. The chart licenses will be sent upon approval of the order by Transas distributor
Chart ordering: If subscription expired, CS informs about it;	Requested charts were not updated because they are expired or not licensed
Updates requesting: If there are no updates, CS sends the refusal reply;	<ul style="list-style-type: none"> <li>Requested charts were not updated because they are expired or not licensed;</li> <li>The request for updates was not processed. To receive online chart corrections you need to upgrade your product license and enable (prolong) Professional Maintenance Service option. Please contact Transas to solve this problem;</li> <li>The request for updates was not processed. To receive online chart corrections you need to upgrade your product license and enable (prolong) SENC Correction Service option. Please contact Transas to solve this problem</li> </ul>
Charts ordering: If an order has been cancelled, CS informs about the fact.	Your request is cancelled

Position the cursor on the order, which you wish to view, and press the left trackball button.

The table in the right part will display chart folios and charts included in the order.

If the installation was interrupted during the receipt of an order (see the previous paragraph), select this request in the table.

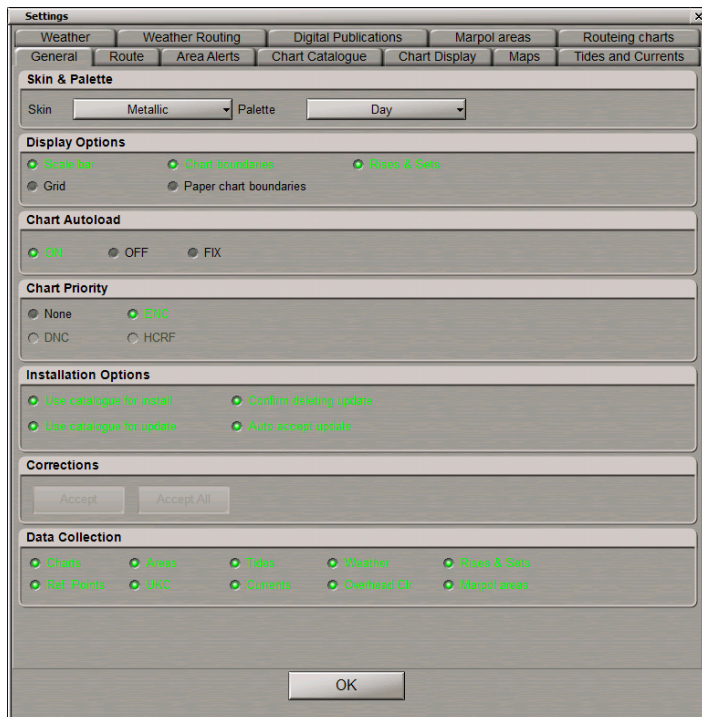
## Data Management

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



# Pre-installation Operations

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **General** page.



All checkboxes in **Installation Options** is checked by default.



This is why the following operations will be performed during the chart installation:

- **Use catalogue for install** – file with chart catalogue (CATALOG.031) will be used during the chart installation;
- **Use catalogue for update** – file with chart catalogue (CATALOG.031) will be used during the chart updating;
- **Confirm deleting update** – to confirm automatically the deleting updating when handling S-57 format charts;
- **Auto accept update** – to install the successive updating automatically, without prompt for accepting previous updating for S-57 format charts.

If necessary, uncheck the relevant checkboxes.




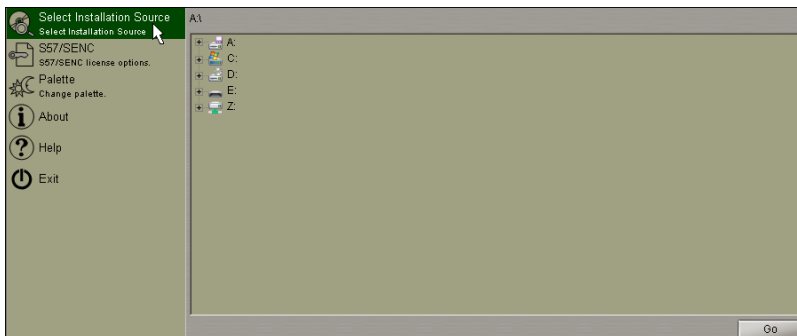
In **Chart Priority** group select the chart loading priority under the ship position:

- **None** – to load charts most suitable to the set scale. In this case, if there are several charts on the same scale, priority is given to the TX-97 (TRX) format charts;
- **ENC** – to load ENC format vector charts.

Check the necessary checkbox.

## Data Source Scanning

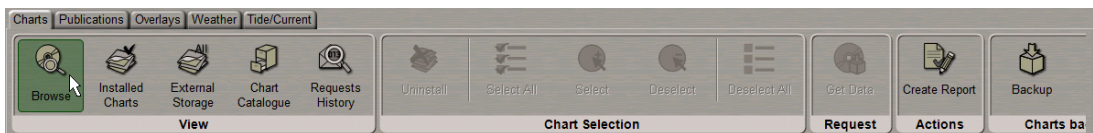
If you have any data on a CD/DVD or on the memory switch received by e-mail, which you wish to install, press the Transas button  and choose the **Select Installation Source** item from the drop-down menu.



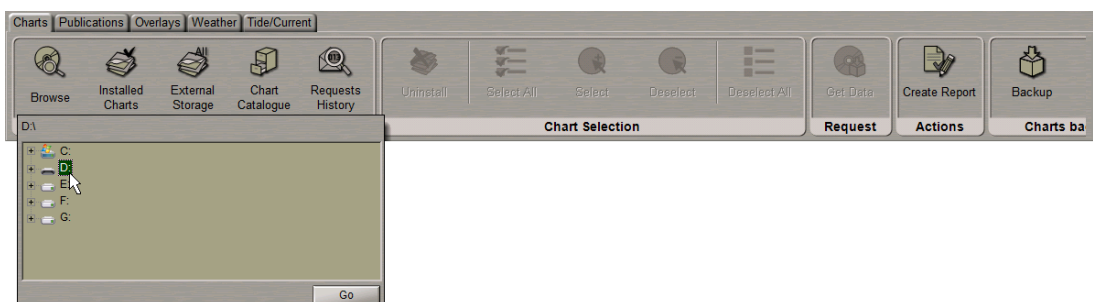
Specify the path to the source, which contains the data and press **Go** button.



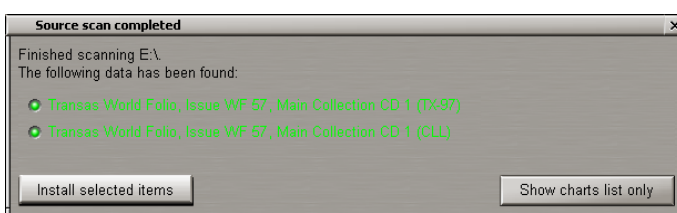
A similar result can be obtained by using the Ribbon. Switch to **Charts** tab and press **Browse** button in **View** group.



Specify the path to the source, which contains the data and press **Go** button.



The **Source scan completed** window will open up. This window displays all the possible operations accessible from the scanned source.

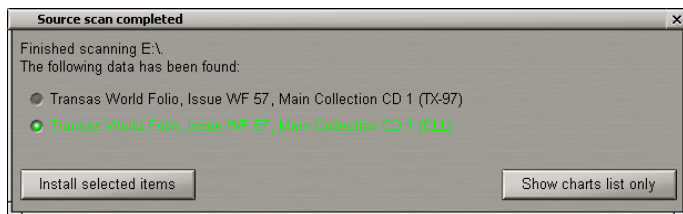


Specify the necessary action.

# Installing All Data

**ATTENTION!** All data received in the Advanced Delivery Data (ADD) mode is set automatically.

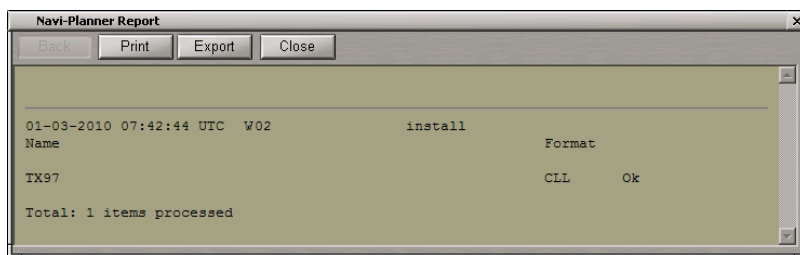
When you manually set the data, perform data source scanning (see previous paragraph). Specify the necessary action.



Press the **Install selected items** button.

**NOTE:** If the **Show charts list only** button is pressed, the **External Storage** table will display a list of charts contained in the scanned storage for the selection and installation in the manual mode.

The data will be installed, and an operation log will be formed.

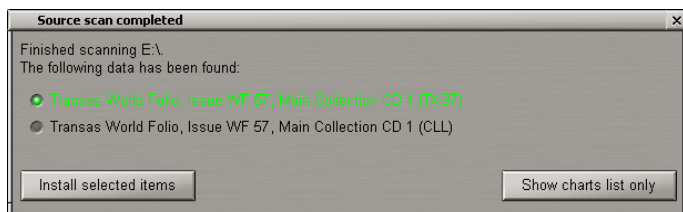


After the installation, data is automatically synchronized with the MFD. Synchronization process is displayed in the top right corner of the Navi-Planner 4000 screen.



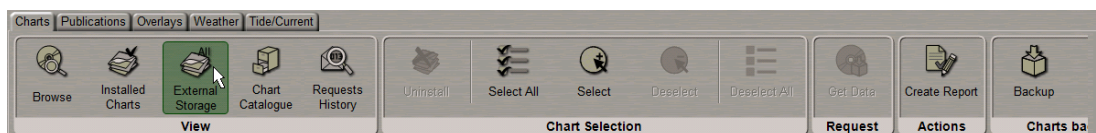
# Installing Selected Charts

Perform data source scanning (see previous paragraph). Specify source of charts.



Press the **Show charts list only** button.

In the Ribbon switch to **Charts** tab and press the **External Storage** button in the **View** group.





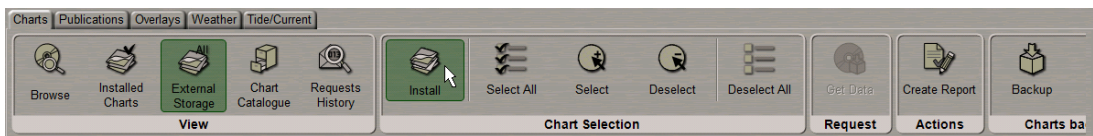
The bottom part of the screen will display the corresponding table.

After the ending of the disk scanning the table will display a list of charts contained in the scanned storage.

Name	Scale	Last update	Expires	Format	Status
DE110000	1 : 1,500,000	26-11-2011	1-10-2012	SENC	Licensed
DE221000	1 : 350,000	10-02-2012	1-10-2012	SENC	Licensed
DE260001	1 : 350,000	15-05-2009	1-10-2012	SENC	Licensed
DE316001	1 : 45,000	24-02-2012	1-10-2012	SENC	Licensed
DE316002	1 : 90,000	10-02-2012	1-10-2012	SENC	Licensed
DE316003	1 : 45,000	24-02-2012	1-10-2012	SENC	Licensed
DE316004	1 : 90,000	16-12-2011	1-10-2012	SENC	Licensed
DE321001	1 : 90,000	03-02-2012	1-10-2012	SENC	Licensed
DE321002	1 : 75,000	24-02-2012	1-10-2012	SENC	Licensed
DE360010	1 : 180,000	15-05-2009	1-10-2012	SENC	Licensed
DE416010	1 : 25,000	27-05-2011	1-10-2012	SENC	Licensed
DE416012	1 : 12,500	26-11-2010	1-10-2012	SENC	Licensed

Select the charts, which will be installed (see section *Charts Selection*).

In the Ribbon press **Install** button in the **Chart Selection** group.

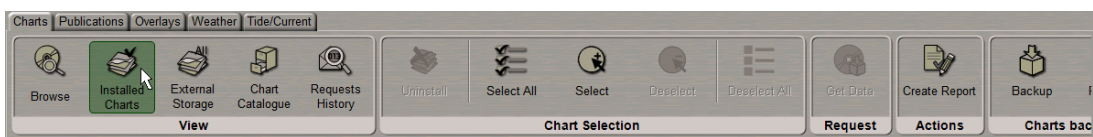


The charts will be installed, and an operation log will be formed.

Chart	Format	Scale	Size	Result
22061	Tx97	1:250000	273Kb	Installation Ok
25002	Tx97	1:25000	113Kb	Installation Ok
25004	Tx97	1:25000	76Kb	Installation Ok
25006	Tx97	1:50000	192Kb	Installation Ok
27045	Tx97	1:5000	63Kb	Installation Ok
27047	Tx97	1:10000	71Kb	Installation Ok
27047A	Tx97	1:7500	10Kb	Installation Ok

Close the log. Chart installation process is completed.

In the Ribbon switch to **Charts** tab and press **Installed Charts** button in **View** group.



The bottom part of the screen will display the corresponding table. The installed charts are displayed in the table.

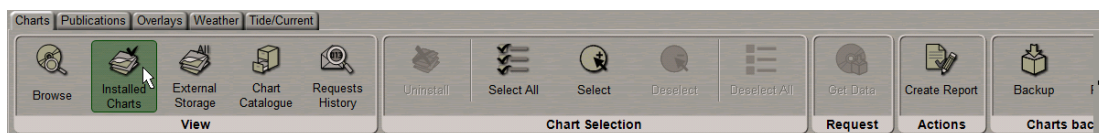
Name	Scale	Last update	Updated to	Expires	Format	Status
GB602704	1 : 10,000	08-08-2011	WK36-12	1-10-2012	SENC	Licensed
GB603404A	1 : 4,000	19-02-2012	WK09-12	1-10-2012	SENC	Licensed
GB603404C	1 : 2,000	21-07-2011	WK09-12	1-10-2012	SENC	Licensed
GB602571	1 : 4,000	21-10-2011	WK36-12	1-6-2012	SENC	Expired
GB602572	1 : 4,000	02-08-2011	WK36-12	1-10-2012	SENC	Licensed
GB602703	1 : 2,000	20-12-2011	WK09-12	1-10-2012	SENC	Licensed
GB603275	1 : 4,000	04-11-2011	WK22-12	1-6-2012	SENC	Expired
GB603337	1 : 4,000	20-01-2012	WK09-12	1-6-2012	SENC	Expired
GB800001	1 : 2,500,000	16-02-2012	UPDATE WK07-12 (16-02-	31-12-2012	AIO	Licensed
105	1 : 75,000	17-02-2005		1-11-2012	ARCS	Licensed
106	1 : 75,000	28-10-2004		1-11-2012	ARCS	Licensed
107	1 : 75,000	30-09-2004		1-11-2012	ARCS	Licensed
109	1 : 50,000	18-09-2008		1-11-2012	ARCS	Licensed
109a	1 : 50,000	18-09-2008		1-11-2012	ARCS	Licensed
109b	1 : 50,000	18-09-2008		1-11-2012	ARCS	Licensed

Charts in the table are shown in different colours:

- Red – for charts whose license has expired;
- Orange – for charts whose license will expire in less than 30 days;
- Black – for the rest of the charts.

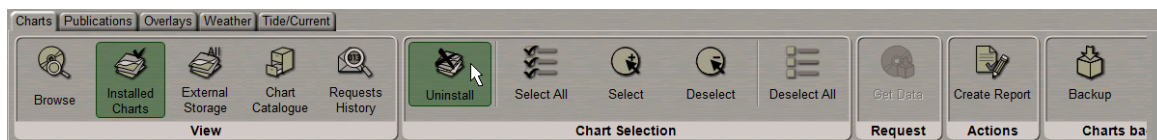
## Deleting Charts

In the Ribbon switch to the **Charts** tab and press **Installed Charts** button in **View** group .

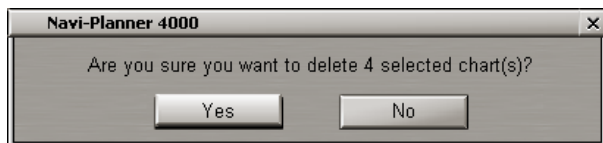


The bottom part of the screen will display the corresponding table. Select the charts, which will be deleted (see section *Charts Selection*).

In the Ribbon press **Uninstall** button in **Chart Selection** group.

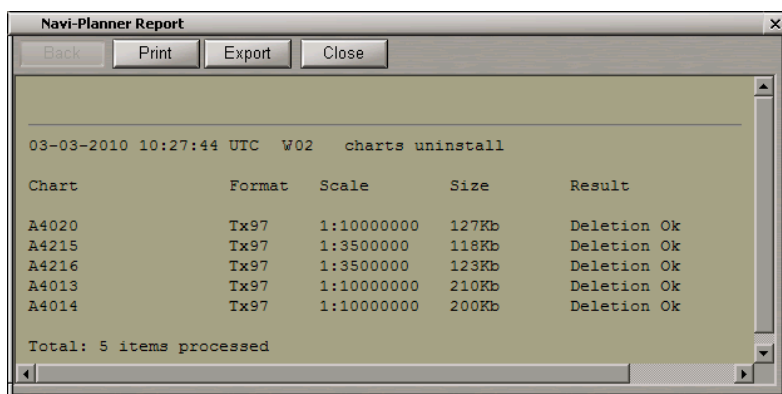


Confirmation window is displayed.



Press **Yes** button to delete the selected charts.

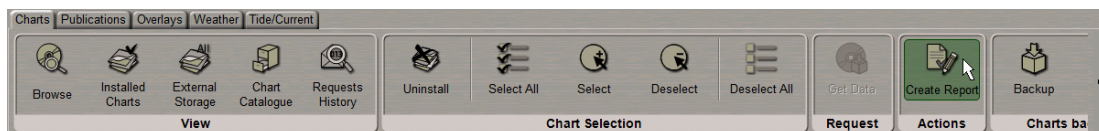
The charts will be deleted, and an operation log will be formed.



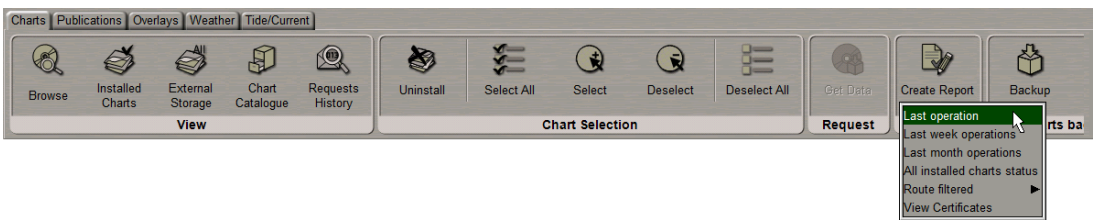
Close the log. The deleting process is completed.

## Viewing Operations Logs

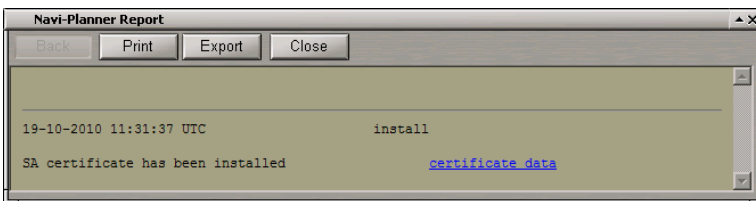
In the Ribbon switch to **Charts** tab. Press **Create report** button in **Actions** group.



Select the necessary report from the list ([Last operation](#), [Last week operation](#) or [Last month operation](#)).

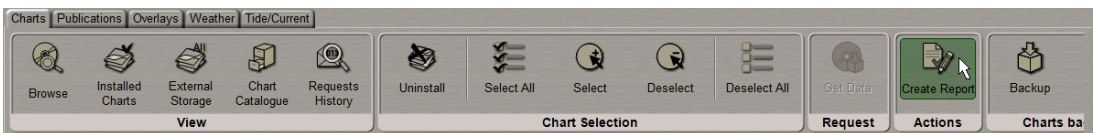


The report will be created.

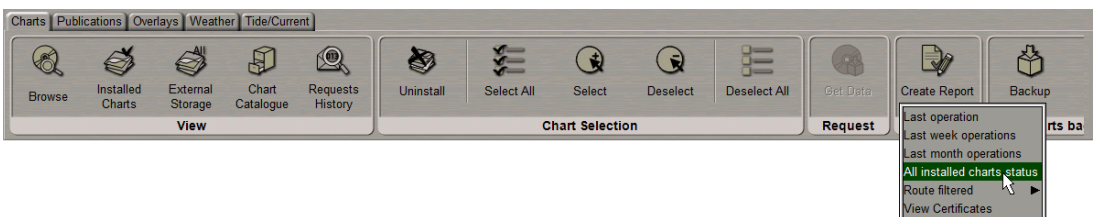


## Viewing Chart Status

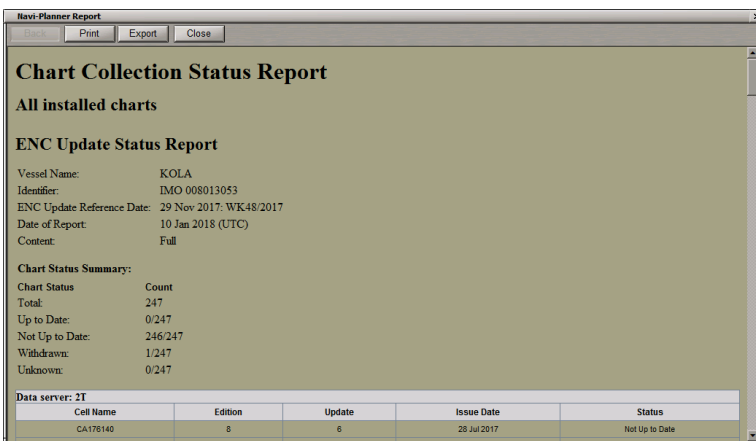
In the Ribbon switch to **Charts** tab. Press **Create report** button in **Actions** group.



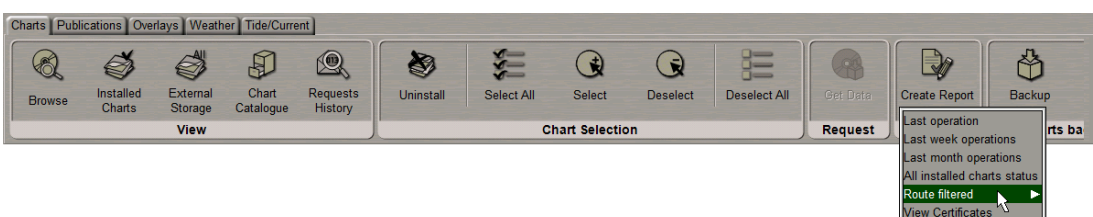
Select the [All installed charts status](#) item from the list.



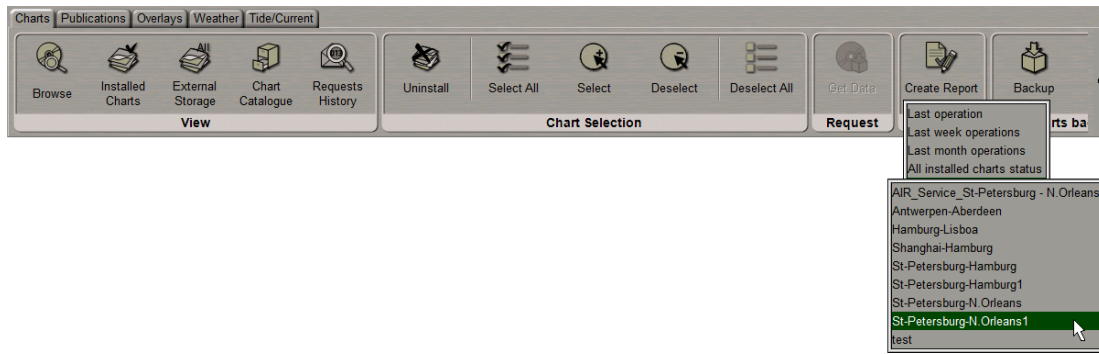
A report containing information on all the installed charts will be created.



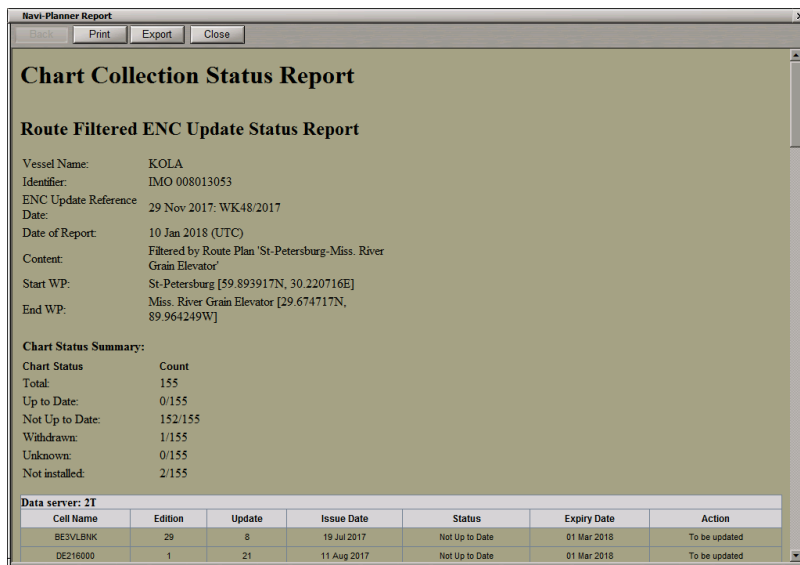
Select the [Route filtered](#) item from the list.



From the drop-down list select the necessary route.



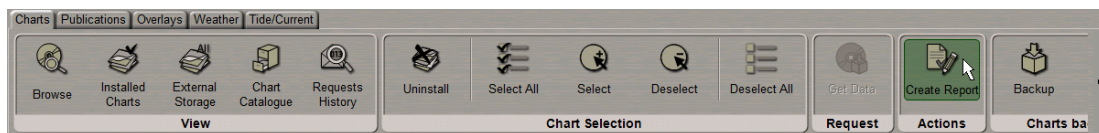
A report containing information on all the installed charts along the necessary route will be created.



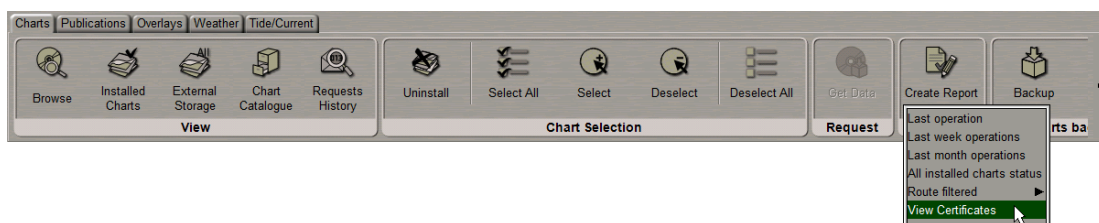
## Viewing Certificates

**ATTENTION!** Before viewing the certificates it is recommended to send a request for Full License and install the reply.

In the Ribbon switch to **Charts** tab. Press **Create report** button in **Actions** group.



Select the **View Certificates** item from the drop-down list.



In the **Certificates** window which will open up select the necessary certificate:

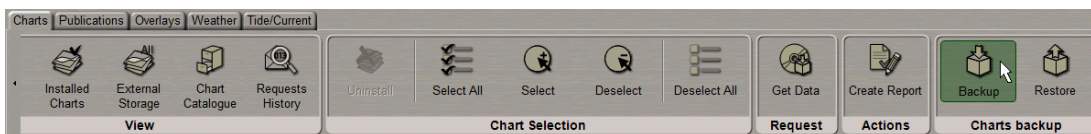


Press **View** button.

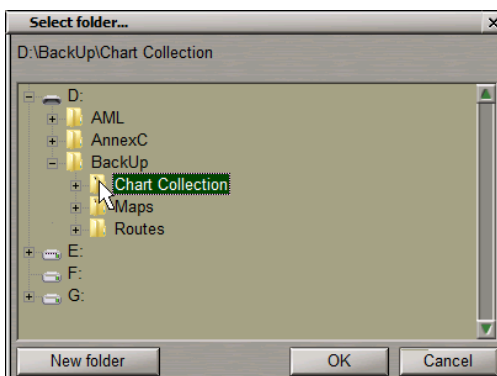


## Chart Collection Backup and Restore

For the backup copying of the chart collection installed on the ship, in the Ribbon switch to the **Charts** tab. Press **Backup** button in the **Charts Backup** group.

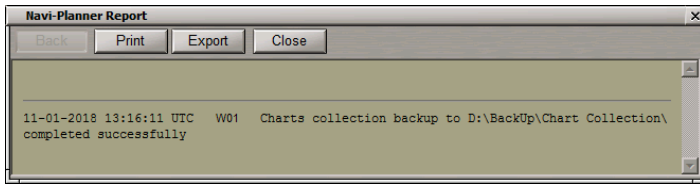


Specify the path to the folder where the chart collection backup copy will be stored.

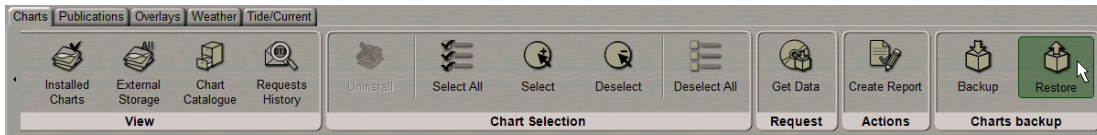


Press the **OK** button.

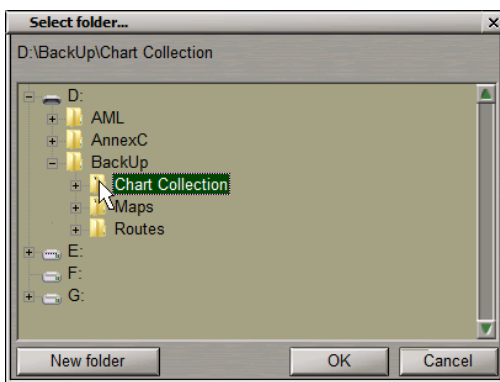
After the chart collection backup copying, the following message will be displayed:



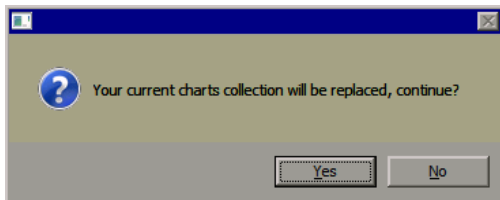
To restore the chart collection, in the Ribbon press the **Restore** button in the **Charts backup** group.



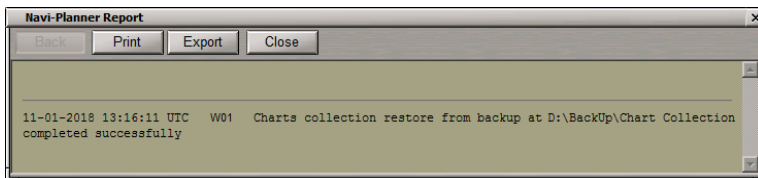
Specify the path to the folder in which the chart collection backup copy is stored.



Press the **OK** button.



To continue the restore operation, press the **Yes** button. After the chart collection restoration, the following message will be displayed:

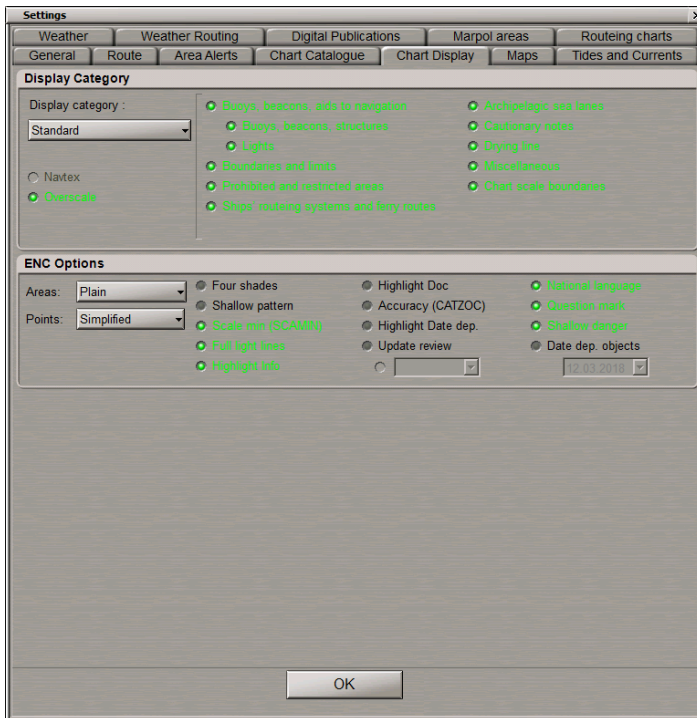


# Switching Chart Information Layers

According to the IEC 61174 standard the following information, has to be displayed during planning of a route and monitoring of a route:

- Display Base to be permanently shown on the Navi-Planner 4000 screen, consisting of:
  - Coastline (high water);
  - Own ship's safety contour;
  - Isolated underwater dangers of depths less than the safety contour which lie within
  - Safe waters defined by the safety contour;
  - Isolated dangers above water which lie within the safe water defined by the safety
  - Contour such as fixed structures, overhead wires, etc;
  - Scale, range and north arrow;
  - Units of depth and height;
  - Display mode.
- Standard Display, consisting of:
  - Display base;
  - Drying line;
  - Buoys, beacons, other aids to navigation and fixed structures;
  - Boundaries of fairways, channels, etc.;
  - Visual and radar conspicuous features;
  - Prohibited and restricted areas;
  - Chart scale boundaries;
  - Indication of cautionary notes;
  - Ship's routing systems and ferry routes;
  - Archipelagic sea lanes.
- All other information, to be displayed individually on demand, for example:
  - Spot soundings;
  - Submarine cables and pipelines;
  - Details of all isolated dangers;
  - Details of aids to navigation;
  - Contents of cautionary notes;
  - ENC edition date;
  - Most recent chart update number;
  - Magnetic variation;
  - Graticule;
  - Place names.

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Chart Display** page.



To switch presentations of different display types in **Display Category** group, press the following buttons:

- **Base** – to turn on presentation of objects included in the Base Display;
- **Standard** – to turn on presentation of objects included in the Standard Display;
- **Custom** – to turn on presentation of objects included in the Additional Information Display at the user discretion;
- **All** - to turn on presentation of all available objects.

If selected **Standard** display, all the checkboxes for turning on the display of the objects included in the display will be checked by default:

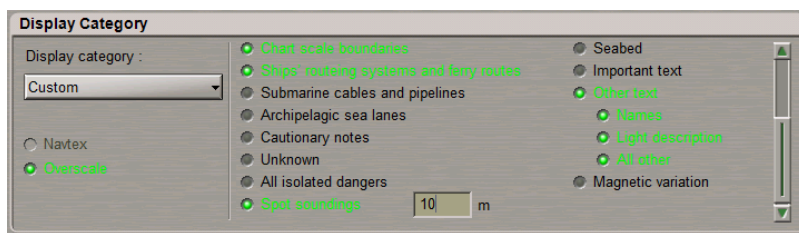
- **Buoys, beacons, aids to navigation** – to turn on the display of buoys, beacons, aids to navigation;
- **Boundaries and limits** – to turn on the display of boundaries and limits;
- **Prohibited and restricted areas** – to turn on the display of prohibited and restricted areas;
- **Ships' routing systems and ferry routes** – to turn on the display of ships' routing systems and ferry routes;
- **Archipelagic sea lanes** – to turn on the display of archipelagic sea lanes;
- **Cautionary notes** – to turn on the display of cautionary notes;
- **Drying line** – to turn on the display of drying lines;
- **Miscellaneous** - to turn on the display of all not covered objects by **Standard** display;
- **Chart scale boundaries** – to turn on the display of chart scale boundaries;.

Uncheck the appropriate checkboxes to turn off the display of unnecessary chart objects.



If selected Custom display, check the checkboxes for turning on the display of necessary additional chart objects:

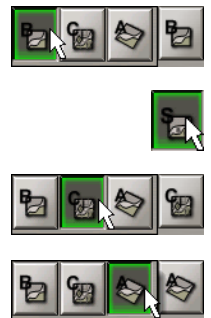
- All objects included in the **Standard** display;
- **All Isolated dangers** – to turn on the display of isolated dangers with depths over them larger than the safety depth;
- **Submarine cables, pipelines** – to turn on the display of submerged cables and pipelines;
- **All depth contours** – to turn on the display of all the depth contours;
- **Tidal** - to turn on the display of tidal information;
- **Depth contours** – to turn on the display of depth contours with depths over them larger than the safety depth;
- **Seabed** – to turn on the display of ground characteristics;
- **Important text** – to turn on the display of important text;
- **Other text** – to turn on the display of other text (Names, Light description, etc.);
- **Unknown** - to turn on the display of objects which are not specified in S-52 standard;
- **Miscellaneous STD-** to turn on the display of all not covered objects by **Standard** display;
- **Miscellaneous** - to turn on the display of all not covered objects by **Custom** display;
- **Magnetic variation** – to turn on the magnetic variation;
- **Spot soundings to** – to turn on the display of depth values smaller than the setting made in the relevant window (if the setting is "0", all the soundings are displayed).



If selected **All**, all the checkboxes for turning on the display of the all available objects will be checked by default.

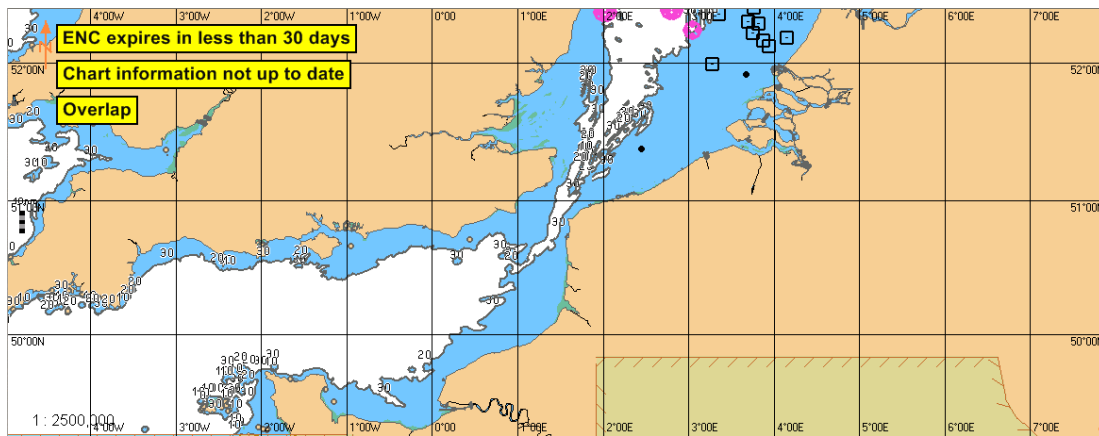
A similar result of switching presentations of different display types can be obtained by using the button in the toolbar of the Chart Panel.

- Base Display;
- Standard Display;
- Custom Display. Additional information classes should be preliminary selected in **Chart Display** page of the **Settings** window (see above);
- All Displays (all additional information classes are displayed).



# Indications about Displayed ENC Cell on Chart Panel

The indications mark the operational status of the displayed chart information which needs special attention of the user. The indications are displayed in the top left corner of the Chart panel in black against the yellow background.

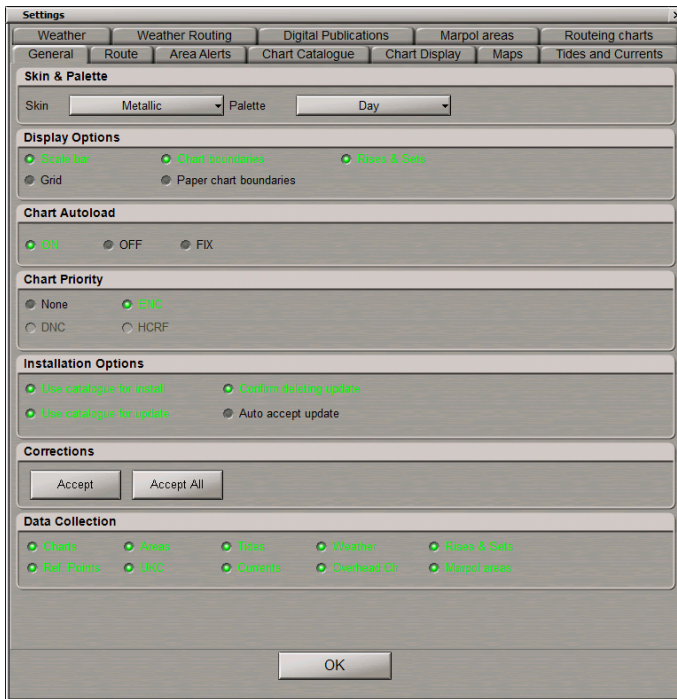


There are the following indications available in the Navi-Planner 4000:

Overlap	if there is overlapping of two or more ENC cells of the same usage band
ENC permit expired	if the installed ENC permit has expired (the chart number is specified in the hint)
ENC expires in less than 30 days	if the loaded chart(s) permit(s) expire within the next 30 days
ENC canceled	if the installed ENC has been canceled (the chart number is specified in the hint)
Chart information not up to date	if the installed ENC is not up-to-date (the chart number is specified in the hint)
Not Real Time	if the viewing date or date range does not match the current date
No ENC shown	Routing charts overlay is ON

# Handling ENC Format Charts

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **General** page.

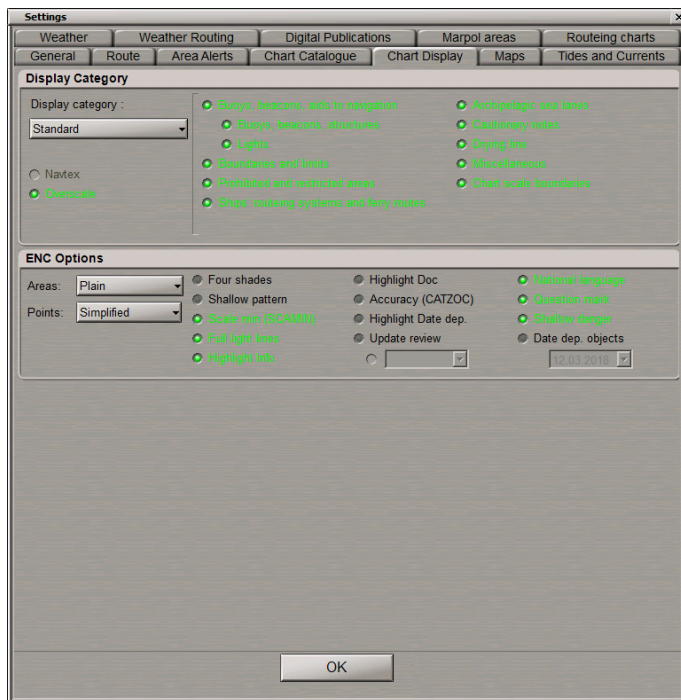


To activate updating acceptance procedure for ENC format charts, press the buttons in **Corrections** group:

- **Accept** – to activate updating acceptance procedure for selected ENC (before the acceptance correction highlighting symbols are displayed);
- **Accept All** – to activate updating for all the ENC format charts (before the activation of chart updating all the modified symbols will be accentuated, after all the corrections have been accepted, the contours of altered symbols will disappear).

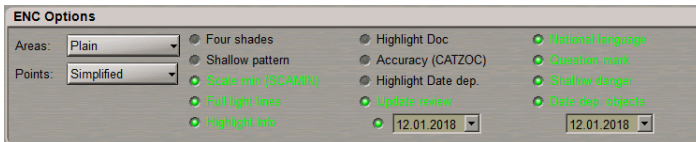
**WARNING!** By default, **Auto accept update** button in **Installation Options** group of **General** page is turning on, and in this case updating will be accepted automatically. It is not advisable to deactivate these functions.

Switch to **Chart Display** page.



For the adjustment of ENC format chart display, use the following controls of **ENC Options** group:

- From **Areas** drop-down list, select the style of area type object boundary display (**Plain** and **Symbolised**);
- From **Points** drop-down list, select the style of the point type object display (**Paper chart** and **Simplified**).



Check the following checkboxes for turning on the display of necessary additional information classes:

- **Four shades** – to turn on the colour highlighting of the set depth areas;
- **Shallow pattern** – to turn on the display of hatching in the presentation of areas with depths smaller than the safety contour on ENC format charts;
- **Use SCAMIN** – to turn on the display of an object on inadmissible scales to it (generalization method selection);
- **Full light lines** – to switch the lengths of lines delimiting the light visibility sectors;
- **Highlight Info** – to turn on the display of highlighting for objects with “Inform” attribute;
- **Highlight Doc** – to turn on the display of highlighting for objects with “Text and/or Picture” attribute;
- **Update review** – to turn on colour highlighting for the objects which have undergone some modification in the process of the latest accepted correction;
- **Accuracy (CATZOC)** – to turn on the display of accuracy symbols for the ship positioning and sounding during seabed contour survey on ENC format charts;
- **Highlight Dat Dep** – to turn on the display of a symbol that indicates where in the chart display the objects with temporal attributes are located;
- **Date dep. objects** - to turn on the display of chart objects with temporal attributes;
- **National names** – to turn on the display of national names;
- **Question mark** – to turn on the display of objects which are not specified in S-52 standard;
- **Shallow danger** – to turn on the display of isolated danger objects which are located in the unsafe waters.

# Handling AIO Charts

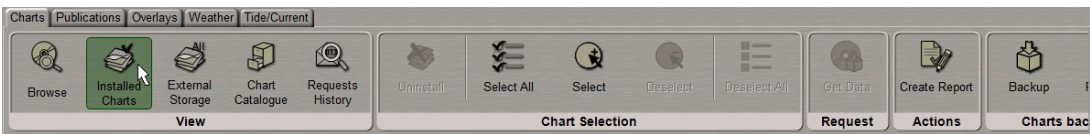
**ATTENTION!** For the AIO charts to be displayed, the ENC charts which they are attached to should be installed.

**NOTE:** AIO charts are installed in much the same way as ENC.

Press the button in the Task Selection Area to switch to **Charts** task.



In the Ribbon switch to the **Charts** tab and press **Installed Charts** button in **View** group .



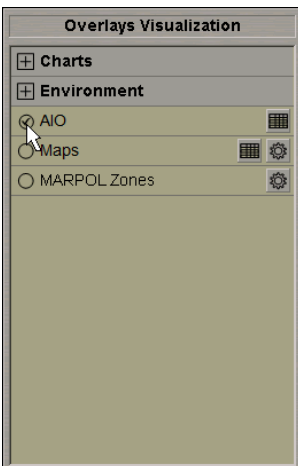
The bottom part of the screen will display the corresponding table. Check that the AIO chart is installed.

Name	Scale	Last update	Updated to	Expires	Format	Status
GB603275	1 : 4,000	04-11-2011	WK22-12	1-6-2012	SENC	Expired
GB603337	1 : 4,000	20-01-2012	WK09-12	1-6-2012	SENC	Expired
GB800001	1 : 2,500,000	16-02-2012	UPDATE WK07-12 (16-02-	31-12-2012	AIO	Licensed
a1076	1 : 75,000	23-02-2012	WK08-12		TX-97	Licensed
a1076a	1 : 75,000	23-02-2012	WK08-12		TX-97	Licensed
a1078	1 : 20,000	23-02-2012	WK08-12		TX-97	Licensed
a1078a	1 : 5,000	23-02-2012	WK08-12		TX-97	Licensed
a1104	1 : 1,000,000	23-02-2012	WK08-12		TX-97	Licensed
a1111	1 : 200,000	23-02-2012	WK08-12		TX-97	Licensed
a1119	1 : 200,000	23-02-2012	WK08-12		TX-97	Licensed
a1125	1 : 500,000	23-02-2012	WK08-12		TX-97	Licensed
a1129	1 : 500,000	23-02-2012	WK08-12		TX-97	Licensed
a1136	1 : 25,000	23-02-2012	WK08-12		TX-97	Licensed

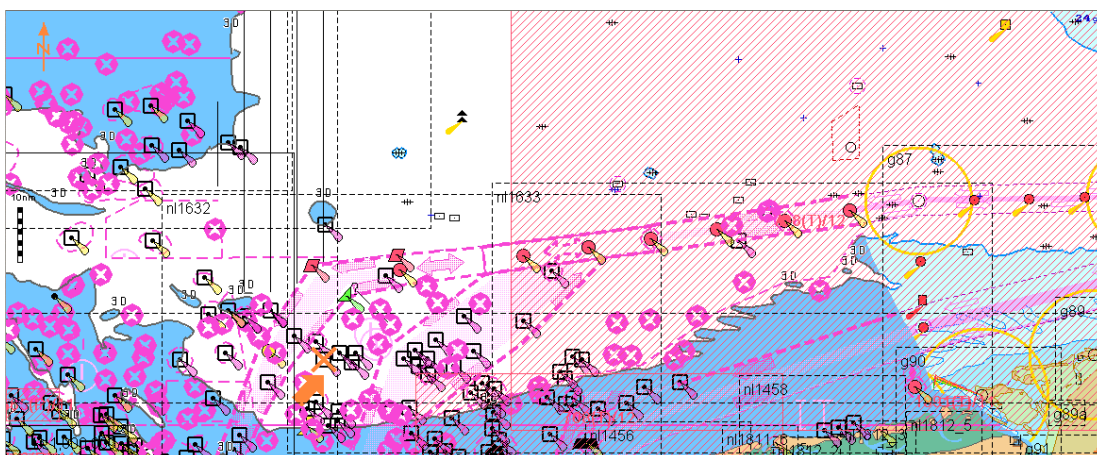
Press the button in the toolbar of the Chart Panel.



In the **Overlays Visualization** window check the **AIO** checkbox.



The Chart Panel displays a AIO layer.



Use the Info function (see below section *Obtaining Information on Vector Chart and Chart Objects*).

On the **Info** panel select the **General Chart Information** notation in **GB80001: S57Ed3\_AIO Chart** section by positioning the cursor on it, and press the left trackball button.

The page with information on the AIO chart will open up.



In the Ribbon switch to the **Overlays** tab and press **AIO** button in **Chart Overlays** group .



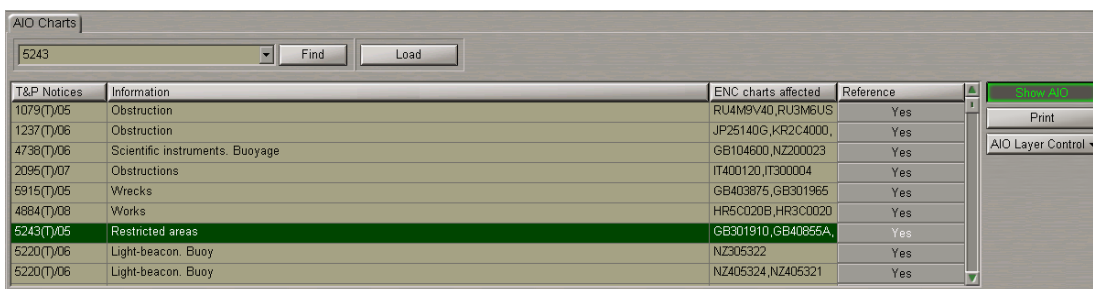
The table which will open up shows the NTM (Notices To Mariners) included in the AIO chart.

T&P Notices	Information	ENC Charts Affected	Reference
57(T)/13	Depths.	JP340JBG,JP44P6SI,	Yes
3424(T)/11	Automatic Identification Systems.	C1311500,C1411510,k	Yes
3218(T)/12	Measuring instruments. Buoyage.	GB301607,GB40284B,	Yes
3619(T)/09	Light	JP64R1FK,JP54R1FJ,	Yes
3424(T)/11	Automatic Identification Systems.	C1311300,C1311700,k	Yes
3440(T)/11	Buoyage. Restricted areas.	DE316003,DE416050,l	Yes
526(T)/10	Depths.	JP34PGDG,JP44PGDI	Yes
531(T)/10	Depths.	JP34M56C	Yes
4446(T)/08	Measuring instruments	GB1A20M3,NO1A300C	Yes

To print NTM table select several rows of the table or the whole table and press **Print** button in the right part of the page.

The Navi-Planner 4000 capabilities can be used for reading and printing out the current NTM.

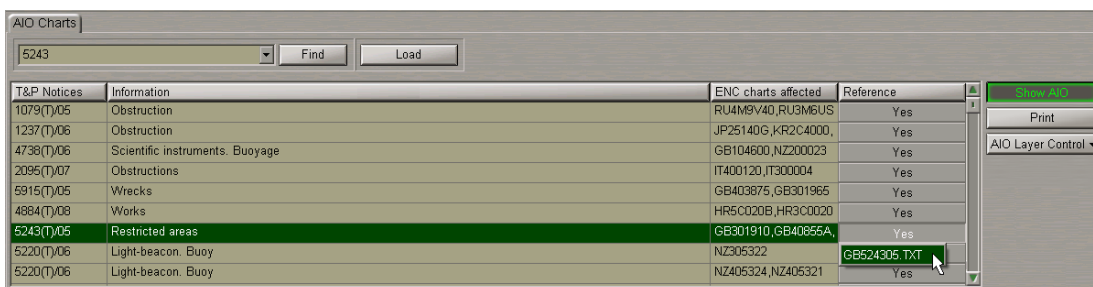
Type the number or the first characters of NTM in the input field, and press **Find** button.



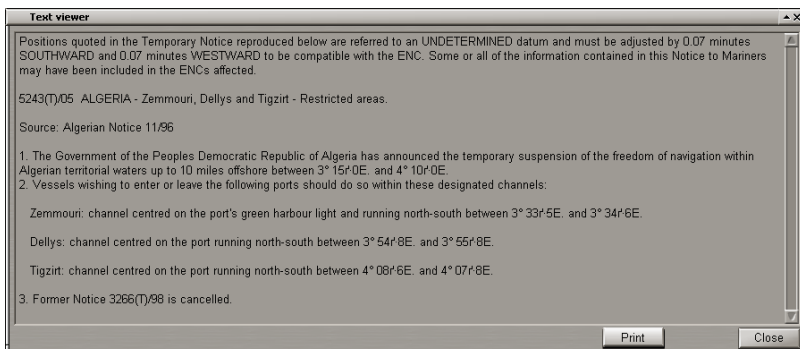
The necessary NTM will be highlighted in the table. The **ENC charts affected** column lists the chart which the NTM in question refers to.

Double click on this NTM: the Chart Panel will display the area which this NTM is applicable to.

Press **Yes** button in the **Reference** column.

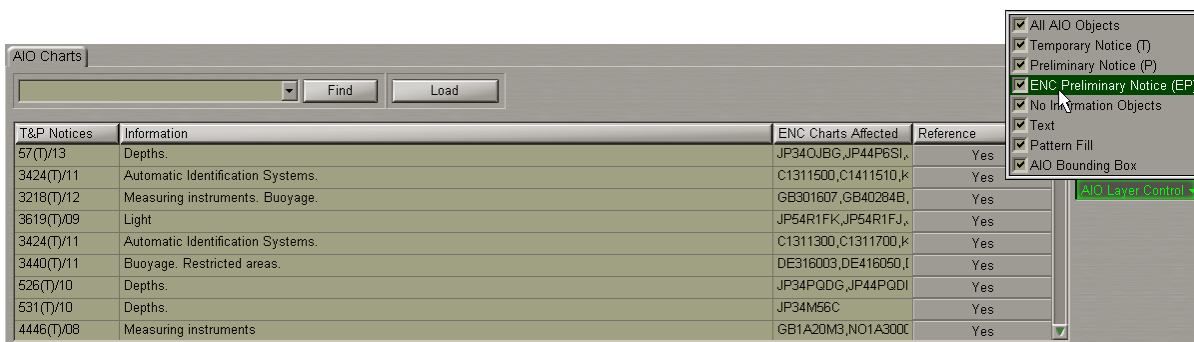


Select the \*.txt file and press the left trackball button.



Read the NTM. If it is necessary to print out the NTM, press the **Print** button. To close the **Text viewer** window, press the **Close** button.

Navi-Planner 4000 implements a capability to show separately different object classes and polygon attributes. To do this press the **AIO Layer Control** button.

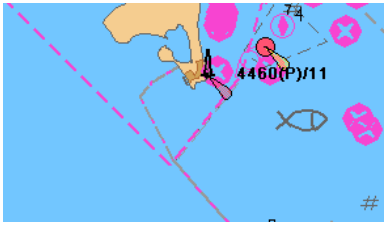
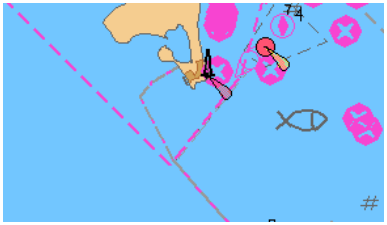
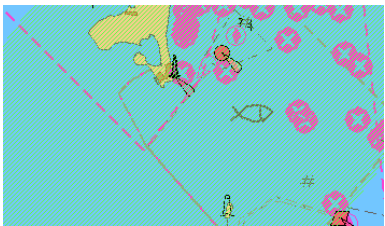
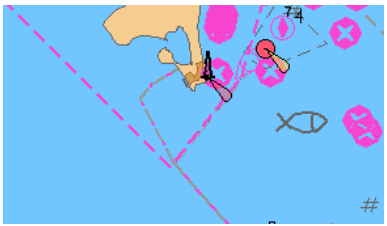
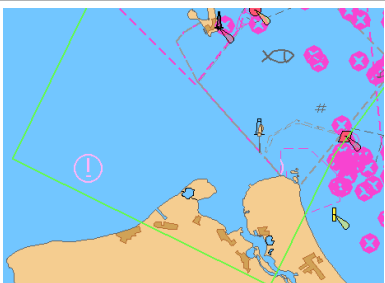
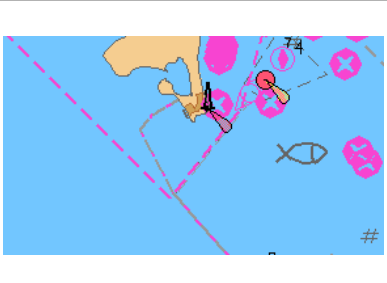


By default, the display of all the object classes and polygon attributes is turned on.

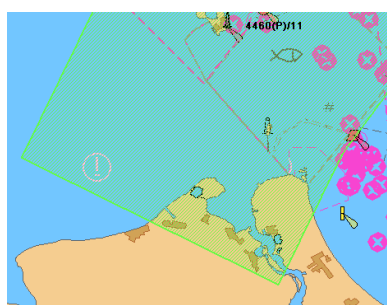
The table below shows ways of displaying object classes on the Chart Panel.

OBJECT CLASS	DEFINITION	HATCHING COLOUR ON THE CHART PANEL
Temporary Notice	Indicates an area on an ENC where UKHO has published a Temporary Notice to Mariners	Red
Preliminary Notice	Indicates an area on an ENC where UKHO has published a Preliminary Notice to Mariners, this includes (EP) NMs	Green
ENC Preliminary Notice	Indicates an additional preliminary information that is specific to ENCs, such as reported navigational hazards that are not yet charted	Blue
No Information	Indicates an area on an ENC where there is no equivalent BA chart coverage of the area	Grey

There is also a capability to display AIO geometric polygons with or without a fill and with text/boundaries turned on or off. The table below provides examples of polygon attributes display with the checkboxes checked/unchecked.

POLYGON ATTRIBUTE	DISPLAY ON	DISPLAY OFF
Text		
Pattern fill		
AIO Bounding Box		

If the display of all attributes is turned on, the polygon looks as follows:





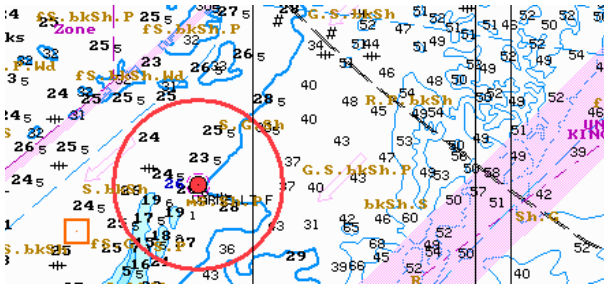
# Obtaining Information on Vector Chart and Chart Objects

## Obtaining Information on Vector Charts

Set the display of the required area by using scaling and **Review** functions. Press button on the Control panel. **Info** panel will open up in the bottom part of the screen.



Position the acquisition marker, which will appear, on point of the chart which information is required to be obtained on.



Press the left trackball button. **Info** panel will display (under the chart name) the list of pages with available information on the objects which fall within the acquisition marker outline.

Select **General Chart Information** notation by positioning the cursor on it, and press the left trackball button. The page with information on the vector chart will open up.

Transas chart (A4010)

**Transas chart (A4010)** [to top](#)

[General Chart Information](#)

[Explanatory and Cautionary notes](#)

**General Chart Information** [to top](#)

A4010	TRANSAS MARINE SENC Ver 6.0 (Verified)	WGS-84 Corr.
	Edition: 10-2004	Alt: 00°00.000'
	Small corrections: 26.11.2009 (through NM 48/2009)	Alon: 000°00.000'
	Projection: Mercator	30.0 m
	Horizontal datum: WGS-84	200.0 m
	Heights and depths in Metres	

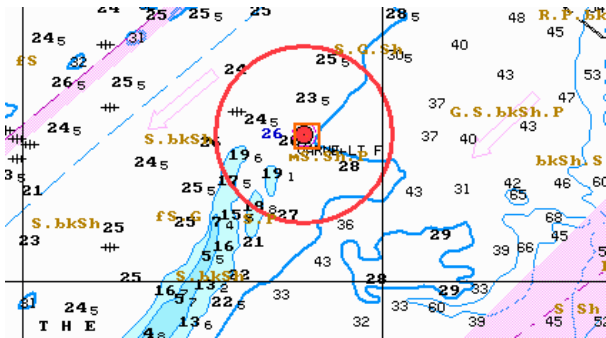
Paper chart Number: 4010  
 NORWEGIAN SEA AND ADJACENT SEAS.  
 Edition: 04-2003 (3), printed: 09-2003. Published in International  
 Projection: Mercator, IALA system - Region A  
 Ellipsoid: WGS-84  
 Scale 1:10000000, depths in metres  
 ALL DISPLAYED CHARTS MUST BE USED IN CONJUNCTION WITH A RECOGNIZED NAUTICAL PAPER CHART OF A SCALE APPROPRIATE TO THE AREA BEING NAVIGATED. THE DATA ON THE FULLY CORRECTED PAPER CHART MUST ALWAYS BE CONSIDERED TO BE MORE RELIABLE.  
 WARNING: No National Hydrographic Office has verified the information in this product and does not accept liability for the accuracy of reproduction or any modifications made.

## Obtaining Information on Point Type Objects

Press button on the Control panel: **Info** panel will open up in the bottom part of the screen.

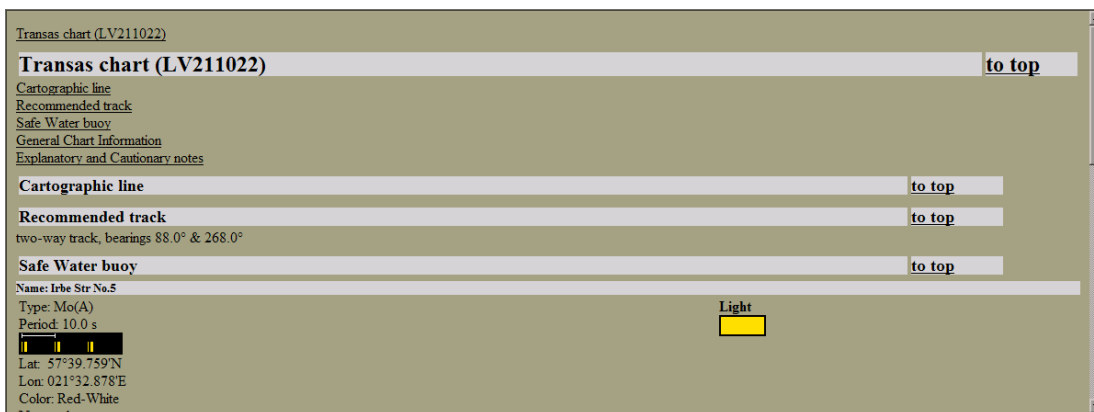


Position the acquisition marker, which will appear, on the object which information is required to be obtained on.



Press the left trackball button. **Info** panel will display (under the chart name) the list of pages with available information on the objects, which fall within the acquisition marker outline.

Select the necessary notation by positioning the cursor on the name and press the left trackball button: **Info** panel will open a page with information on the selected objects:



# Maps

This chapter describes the procedure used in the handling of maps.

---

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# Creating and Saving Maps

**ATTENTION!** Point type objects cannot be displayed on scales smaller than 1:600,000.

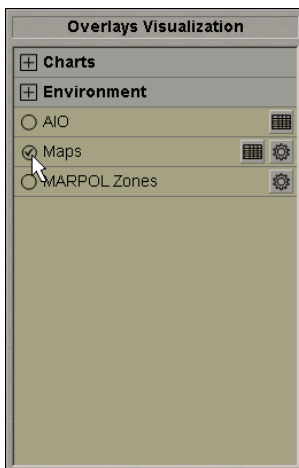
Press the button in the Task Selection Area to switch to the **Maps** task.



Press the button in the toolbar of the Chart Panel.



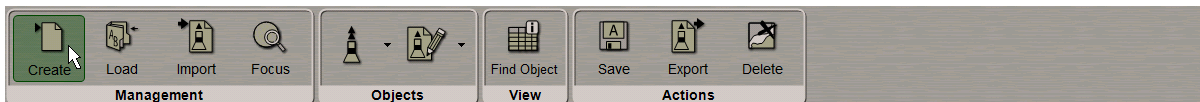
In the **Overlays Visualization** window check **Maps** checkbox.



The map creating procedure consists of following stages:

- creation of map objects;
- selection of the object category and type;
- assigning of attributes to the object (except "Attached files");
- plotting of an object;
- assigning of file attribute "Attached file".
- saving the map.

In the Ribbon, press **Create** button in **Management** group.



The map under the "NEWMAPXX\*" name will be loaded. The name of the loaded map is shown above the Ribbon:



**NOTE:** Next to the map name there is a "\*" symbol which means that the map is edited but not saved. The unsaved maps are not synchronized with other WS's.

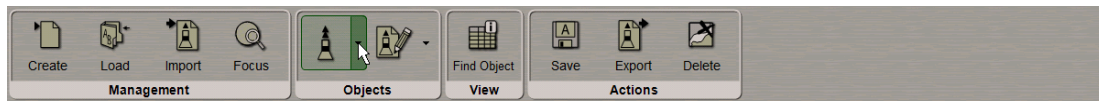
It is then necessary to plot on the map the map objects which may be of the following types:

- Symbol;
- Line;
- Text;
- Depth;
- Shapes.

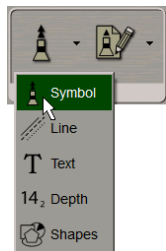
## Creating and Plotting Map Objects

### Plotting Symbol Type Objects

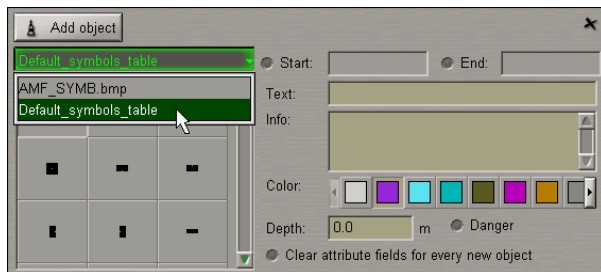
In the Ribbon, press the button with arrow in the **Objects** group.



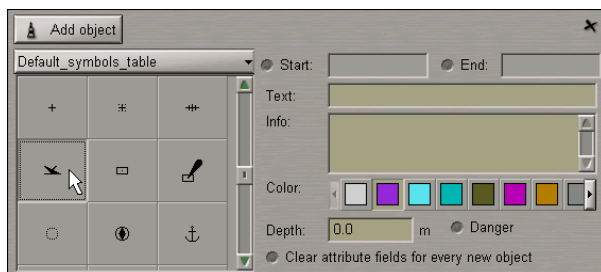
From the drop-down list select the **Symbol** item.



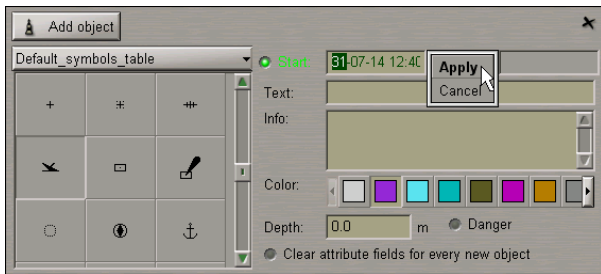
Press the button with the name of current symbol library. From the drop-down list, select the symbol library:



Select the map object symbol type from the table and press the left trackball button.



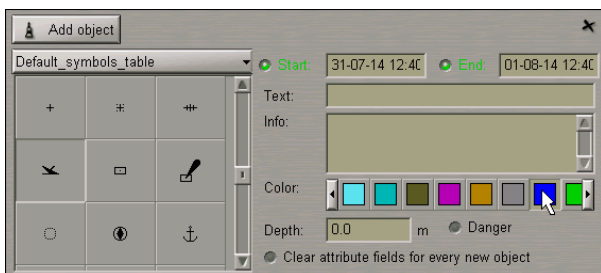
Set the display time (“Temporary”) attribute. To do this, check the **Start** checkbox. Use the trackball to set the start date and time of the map object display and press the right trackball button.



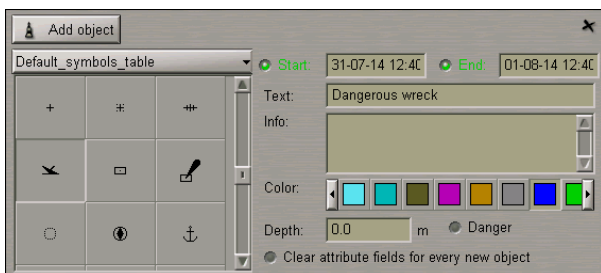
Press the “**Apply**” button to confirm the changes you have made.

Check the **End** checkbox and set the map object display end date and time.

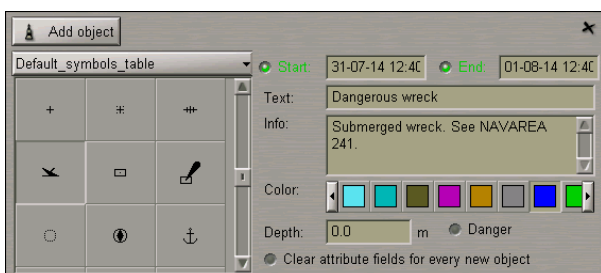
Set the map object colour (“Object colour” attribute). Select it from the **Color** palette.



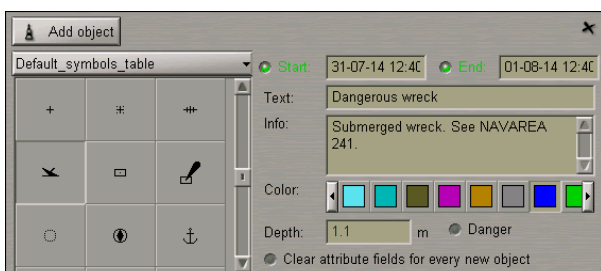
Enter the required text (“Text” attribute) in **Text** input field (information will be displayed on the map):



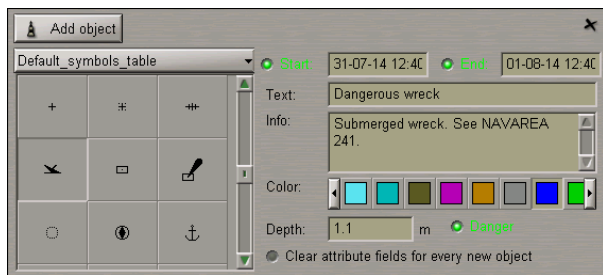
Enter the required information (“Object information” attribute) in **Info** field (information will not be displayed unless Info function is used):



Set the required depth value (“Object depth” attribute) in **Depth** field:



Check the **Danger** checkbox (the “Danger to navigation” attribute) as required:



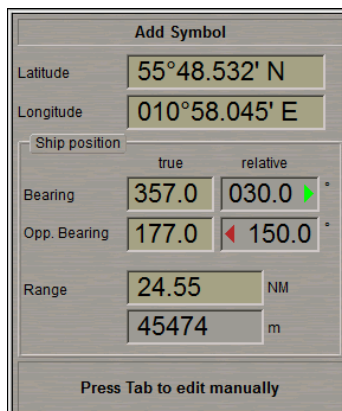
Files are attached (“Attached file” attribute) after the plotting of the map object.

To cancel all the attributes for each new object, check **Clear for new object** checkbox.

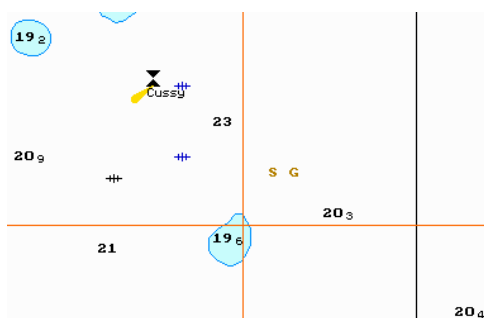
**WARNING!** Point type objects cannot be displayed on scales smaller than 1:600,000. When smaller scales are set, these categories will not be available.

To plot a map object on the chart, press the **Add object** button.

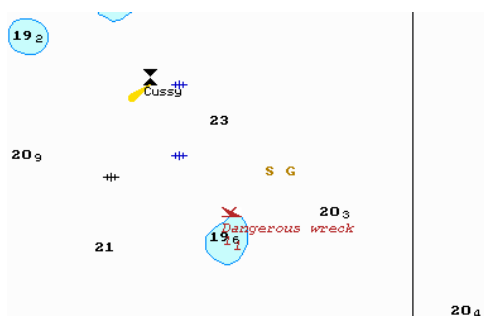
Graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display **Add Symbol** information window with cursor coordinates.



Position the cursor in the required coordinates.



Press the left trackball button: the point type object will be set in the specified coordinates.



Press the right trackball button to exit from the editing mode.

In the Ribbon, press the **Find object** button in the **View** group.

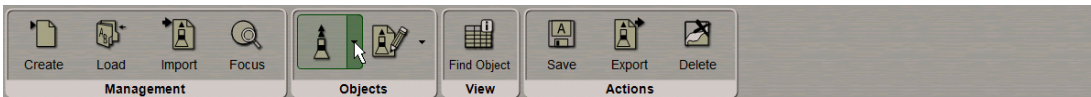


Information on the plotted map object will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

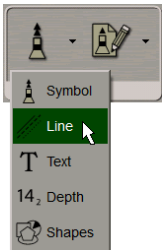
Type	Text	Info	Depth	X	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	1	Dangerous wreck	1.1 m		16-04-18, 12:00	22-04-18, 12:00	17-04-18, 11:53	58° 21.014 N 021° 3

## Plotting Lines

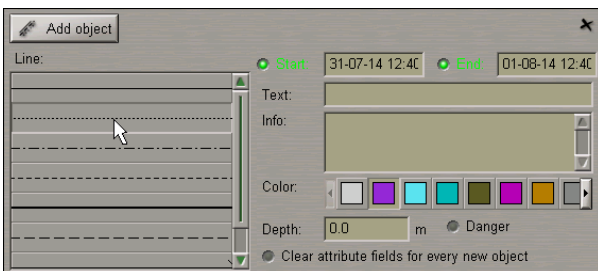
In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Line** item.



Select the type of line type map object from the table.



Set the map object colour (the "Object colour" attribute), the map object display time (the "Temporary" attribute), the map object text (the "Text" attribute), the necessary information (the "Object information" attribute), the "Danger to navigation" attribute and the required depth value (the "Object depth" attribute) (see *Plotting Symbol Type Objects* item of this paragraph).

Files are attached (the "Attached file" attribute) after the plotting of the map object.

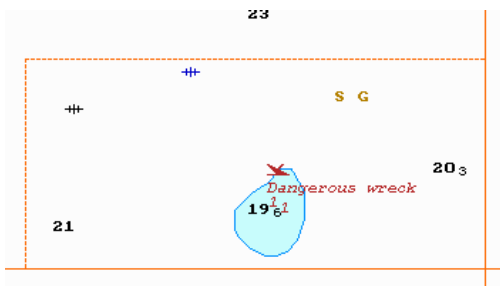
To plot a map object on the chart, press the **Add object** button.



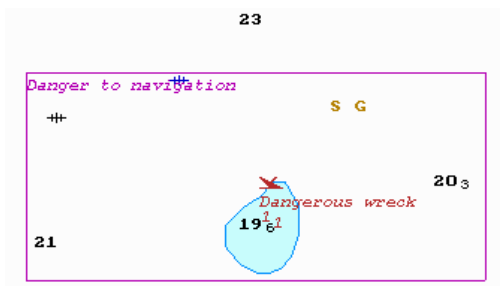
Graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display **Add Line** information window with cursor coordinates.

Add Line	
Latitude	58°11.450' N
Longitude	021°45.300' E
Ship position	
	true      relative
Bearing	084.4      131.4 °
Opp. Bearing	264.4      048.6 °
Range	342.55 NM
Press Tab to edit manually	

To set lines and areas, after the plotting of the initial point, move the cursor to the next point and press the left button again. Repeat the procedure until you set the required number of point.



After the input of the last point of the line or area, press the right trackball button: the cursor will change its form, and the object will be set in the specified coordinates:



In the Ribbon, press the **Find object** button in the **View** group.

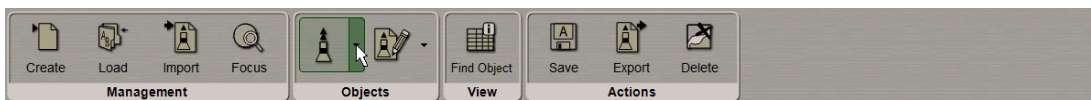


Information on the plotted map object will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

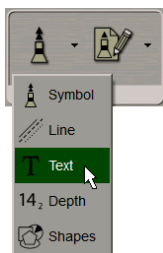
Type	Text	Info	Depth	X	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	Dangerous wreck		1.1 m		16-04-18, 12:00	22-04-18, 12:00	17-04-18, 11:53	58° 26.135 N 021° 4
Line							17-04-18, 11:54	58° 14.913 N 021° 4 58° 15.063 N 021° 4 58° 25.987 N 021° 4

## Plotting Text Object

In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Text** item.



In the **Text** input window enter the necessary text:

**T Add object** ✕

**Start:** 31-07-14 12:40  **End:** 01-08-14 12:40

**Text:**

**Info:**

**Color:**

**Depth:**  m

Clear attribute fields for every new object

Set the map object colour (the “Object colour” attribute), the map object display time (the “Temporary” attribute), required information (the “Object information” attribute), the “Danger to navigation” attribute and the required depth value (the “Object depth” attribute) (see *Plotting Symbol Type Objects* item of this paragraph).

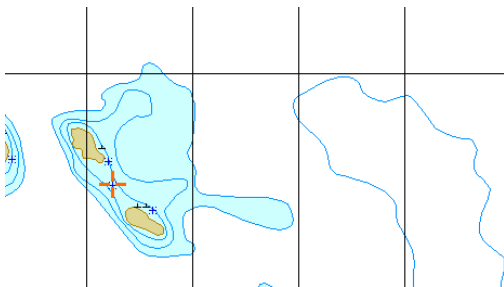
Files are attached (the “Attached file” attribute) after the plotting of a map object.

To plot a map object on the chart, press the **Add object** button.

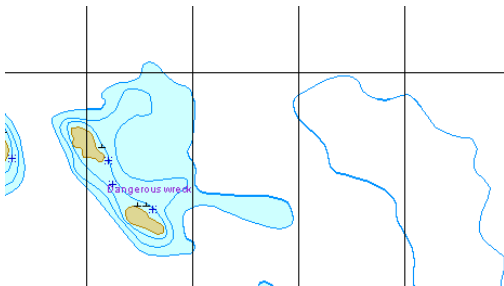
Graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display **Add Text** information window with cursor coordinates.

Add Text	
Latitude	55°55.611' N
Longitude	010°13.510' E
Ship position	
	true      relative
Bearing	194.1      ◀ 118.9 °
Opp. Bearing	014.1      ▶ 061.1 °
Range	108.41 NM
Press Tab to edit manually	

Position the cursor in the required coordinates.



Press the left trackball button: the text type map object will be set in the specified coordinates.



Press the right trackball button to exit from the editing mode.

In the Ribbon, press the **Find object** button in the **View** group.

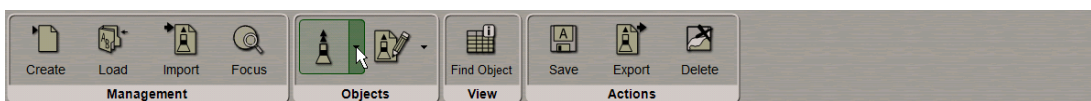


Information on the plotted map object will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

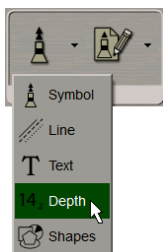
Type	Text	Info	Depth	X	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	Dangerous wreck		1.1 m		16-04-18, 12:00	22-04-18, 12:00	17-04-18, 11:53	58° 20 970 N 021° 2
Text	Dangerous wreck				16-04-18, 10:23	17-04-18, 10:23	17-04-18, 12:18	
Line							17-04-18, 11:54	

## Plotting Depth Object

In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Depth** item.



In the **Depth** input window enter the necessary depth.

14. Add object ✕

**Start:** 31-07-14 12:40  **End:** 01-08-14 12:40

Text: Dangerous wreck

Info:

Color:

Depth:  m  Danger

Clear attribute fields for every new object

Set the map object colour (the “Object colour” attribute), the map object display time (the “Temporary” attribute), map object text (the “Text” attribute), required information (the “Object information” attribute), the “Danger to navigation” attribute and the required depth value (the “Object depth” attribute) (see *Plotting Symbol Type Objects* item of this paragraph).

Files are attached (the “Attached file” attribute) after the plotting of a map object. Files are attached (the “Attached file” attribute) after the plotting of the map object.

To plot a map object on the chart, press the **Add object** button.

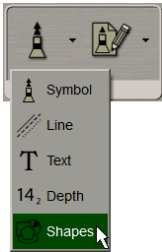


## Plotting Shapes

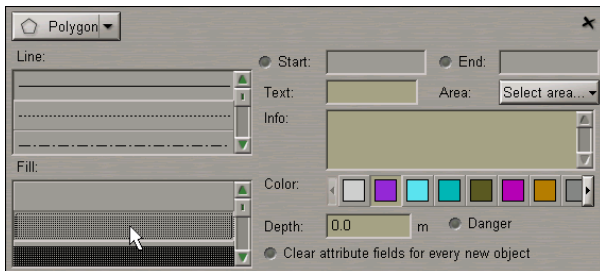
In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Shapes** item.



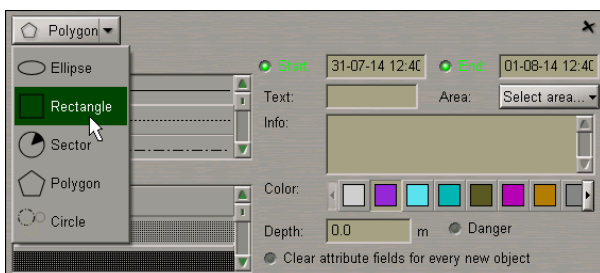
Select from the table the type of the line (**Line**) delineating the shape and of the shape infill (**Fill**):



Set the map object colour ("Object colour" attribute), the map object display time ("Temporary" attribute), map object text (the "Text" attribute), required information (the "Object information" attribute), the "Danger to navigation" attribute and the required depth value (the "Object depth" attribute) (see *Plotting Symbol Type Objects* item of this paragraph).

Files are attached (the "Attached file" attribute) after the plotting of the map object.


Press the button in the top left corner to select the form of a shape to be plotted:



Select the necessary shape from the list. Press the same button again.

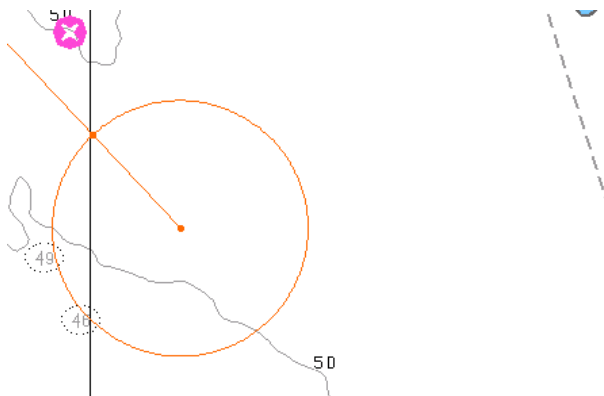
Depending on the selected shape, plot the shape type map object making additional settings as required:

- Ellipse:

Graphic cursor  will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Ellipse** information window with cursor coordinates.

Add Ellipse	
Latitude	58°23.363' N
Longitude	021°23.547' E
<input type="checkbox"/> Ship position	
	<input type="checkbox"/> true <input type="checkbox"/> relative
Bearing	082.8    129.8 °
Opp. Bearing	262.8    050.2 °
Range	334.31 NM
Press Tab to edit manually	

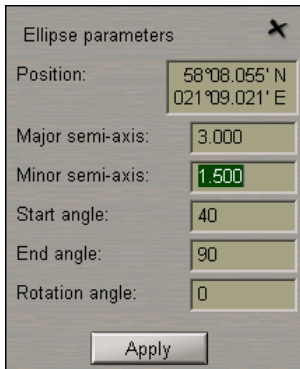
Position the cursor in the central point and press the left trackball button.



The **Add Ellipse** information window will assume the following form:

Add Ellipse	
Latitude 1	58°11.660' N
Longitude 1	020°57.865' E
Latitude 2	58°13.322' N
Longitude 2	020°57.984' E
<input type="checkbox"/> From previous point	
Bearing	002.2 °
Opp. Bearing	182.2 °
Range	1.67 NM
	3088 m
Press Tab to edit manually	

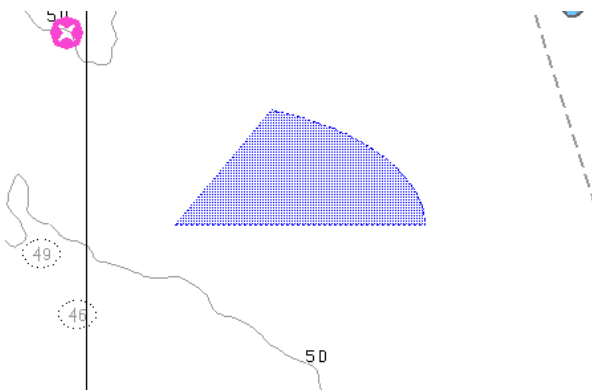
After this, by moving the cursor set the necessary length of the major axis and press the left trackball button again.



Make (correct) additional settings:


- **Major axis** – length of the ellipse major axis;
- **Minor axis** – length of the ellipse minor axis;
- **Start angle** – initial angle of the ellipse display sector relative to the minor axis
- **End angle** – final angle of the ellipse display sector relative to the minor axis
- **Rotation angle** – ellipse turn angle relative to the north.

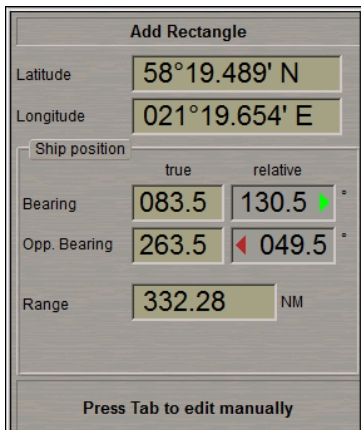
Press the **Apply** button.



Press the right trackball button to exit from the editing mode. The cursor will assume the shape of the task free cursor.

- Rectangle:

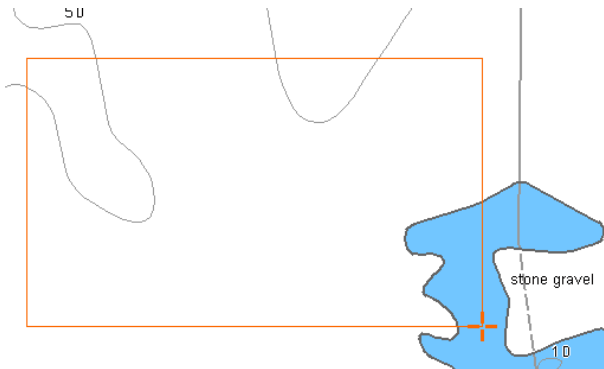
Graphic cursor  will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Rectangle** information window with cursor coordinates.



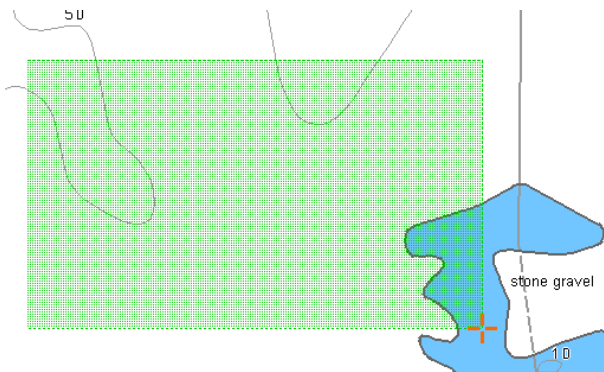


Position the cursor in the initial point and press the left trackball button.

To set the rectangle shape, after the plotting of the initial point, move the cursor so as to construct a rectangle of the necessary form and press the left button again.






After the input of the last point of the rectangle shape, press the right trackball button: the cursor will change its form and the object will be set in the specified coordinates:



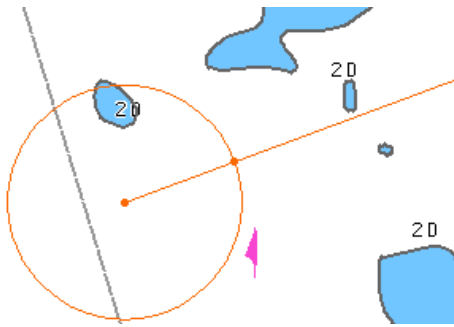
Press the right trackball button to exit from the editing mode. The cursor will assume the shape of the task free cursor.

- Sector:

Graphic cursor  will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Sector** information window with cursor coordinates.

Add Sector	
Latitude	58°18.462' N
Longitude	021°33.394' E
Ship position	
	true      relative
Bearing	083.8      130.8 
Opp. Bearing	263.8  049.2
Range	339.56 NM
Press Tab to edit manually	

Position the cursor in the central point of the sector and press the left trackball button.



The **Add Sector** information window will assume the following form:

Add Sector	
Latitude 1	58°18.633' N
Longitude 1	021°27.767' E
Latitude 2	58°19.530' N
Longitude 2	021°22.927' E
From previous point	
Bearing	289.4 °
Opp. Bearing	109.4 °
Range	2.71 NM
	5013 m
Press Tab to edit manually	

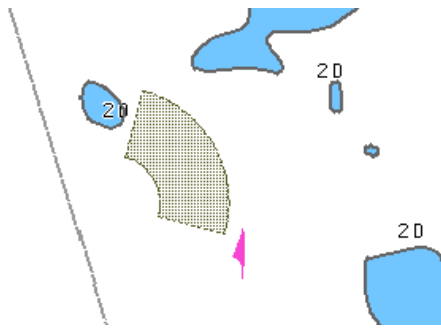
After this, by moving the cursor set the necessary radius and press the left trackball button again.

Sector parameters	
Position:	58°12.103' N 021°27.012' E
Internal radius:	0.600
External radius:	1.468
Start angle:	15
End angle:	105
Apply	

Make (correct) the necessary settings:


- **Internal radius** – length of the sector internal radius;
- **External radius** – length of the sector external radius;
- **Start angle** – initial angle of the display sector relative to the North;
- **End angle** – final angle of the display sector relative to North.

Press the **Apply** button.



Press the right trackball button to exit from the editing mode. The cursor will assume the shape of the task free cursor.

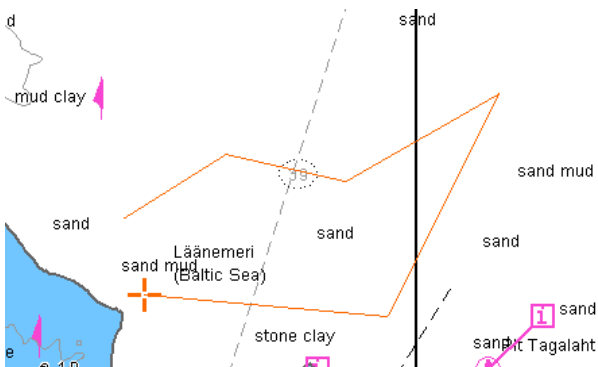
- Polygon:

Graphic cursor  will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Polygon** information window with cursor coordinates.

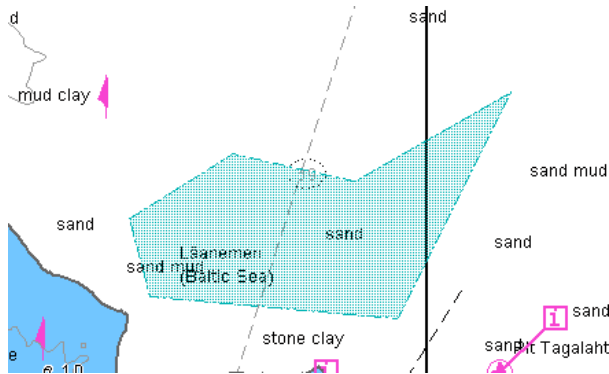
Add Polygon	
Latitude	58°23.112' N
Longitude	021°12.511' E
Ship position	
	<input type="radio"/> true <input checked="" type="radio"/> relative
Bearing	082.8    129.8 °
Opp. Bearing	262.8    050.2 °
Range	328.82 NM
Press Tab to edit manually	

Position the cursor in the initial point of the polygon shape and press the left trackball button.

To set the polygon shape, after the plotting of the initial point, move the cursor to the next point and press the left button again. Repeat the procedure until you set the required number of point.




After the input of the last point of the polygon shape, press the right trackball button: the cursor will change its form and the object will be set in the specified coordinates, the first and the last point of the plotted polygon connected automatically:



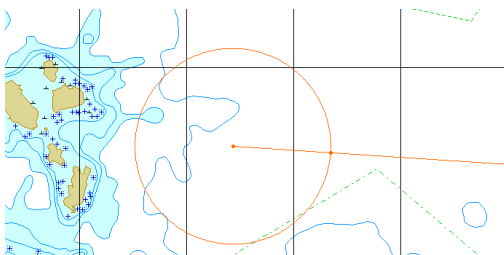
Press the right trackball button to exit from the editing mode. The cursor will assume the shape of the task free cursor.

- Circle:

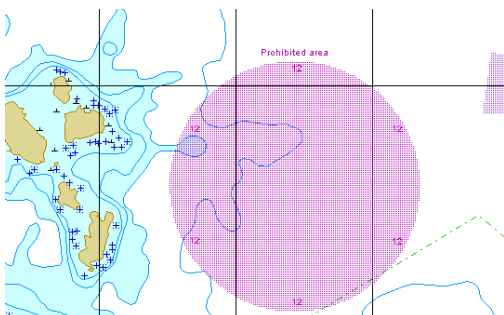
Graphic cursor  will appear on the Chart Panel, whereas the right bottom part of the screen will display the **Add Circle** information window with cursor coordinates.

Add Circle	
Latitude	59°27.851' N
Longitude	019°53.690' E
Ship position	
	<input type="radio"/> true <input type="radio"/> relative
Bearing	069.3    116.3 °
Opp. Bearing	249.3    063.7 °
Range	299.44 NM
Press Tab to edit manually	

Position the cursor in the central point and press the left trackball button.



After this, move the cursor to the necessary radius and press the left trackball button again.



In the Ribbon, press the **Find object** button in the **View** group.



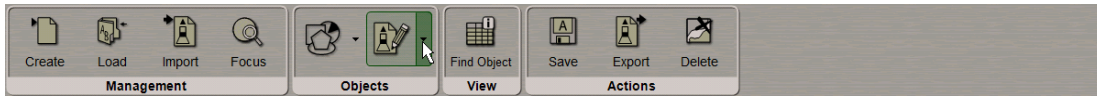
Information on the plotted map object will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

Type	Text	Info	Depth	X	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	Dangerous wreck		1.1 m		16-04-18, 12:00	22-04-18, 12:00	17-04-18, 11:53	58° 22.735 N 021° 0
Depth			2.2 m		16-04-18, 10:23	17-04-18, 10:23	17-04-18, 12:25	58° 27.241 N 021° 0
Text	Dangerous wreck				16-04-18, 10:23	17-04-18, 10:23	17-04-18, 12:18	58° 27.803 N 021° 2
Line							17-04-18, 11:54	58° 27.053 N 021° 4
Polygon							17-04-18, 12:39	58° 23.111 N 021° 5
Circle							17-04-18, 12:38	58° 17.089 N 021° 4
Ellipse							17-04-18, 12:38	58° 10.861 N 021° 4
Sector							17-04-18, 12:39	58° 12.751 N 021° 1
Rectangle							17-04-18, 12:39	58° 12.373 N 021° 0
								58° 19.538 N 021° 0
								58° 22.735 N 021° 0

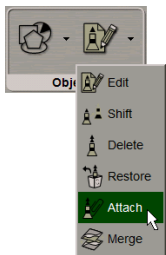
## Assigning “Attached File” Attribute

To assign “Attached file” attribute, the selected object should be plotted on the chart.

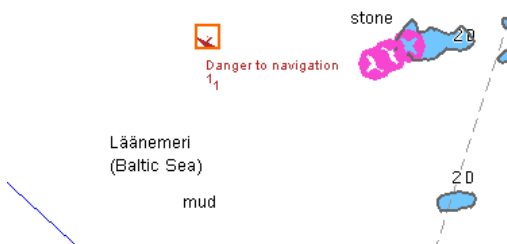
In the Ribbon, press button with arrow in **Objects** group to attach files (\*.txt, \*.rtf, \*.bmp, \*.doc, \*.gif, \*.jpg, \*.tif, \*.pdf) to the map object (“Attached file” attribute).



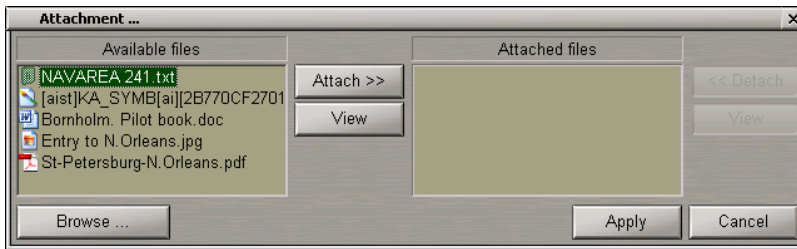
From the drop-down list select **Attach** item.



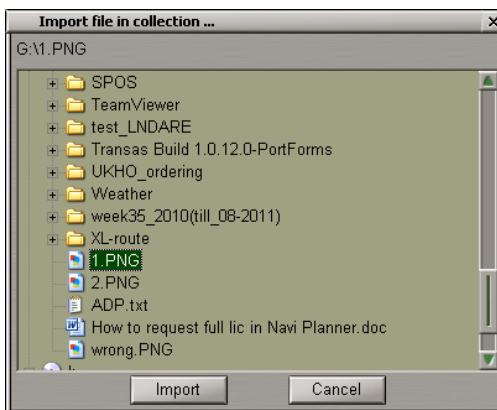
Position the acquisition marker which will appear, on the object and press the left trackball button.



On the Navi-Planner 4000 screen a table with lists of all the files available for attaching will open up (to view the contents of the selected file, press the **View** button on the appropriate panel). The list of files available for attaching is formed based on the files taken by the **Browse** button.



To form the list of files available for attaching press **Browse** button and select the file is about to be put in the list.



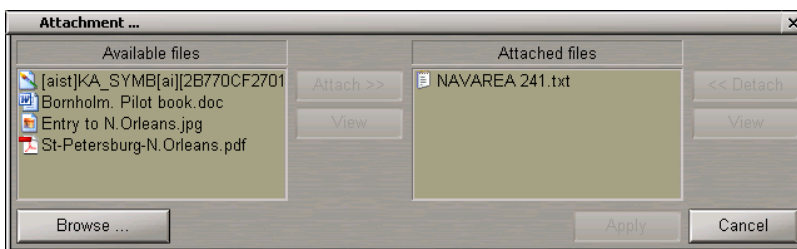
Once the file is browsed press the **Import** button. Press **Cancel** or the  button.

---

NOTE: The file will appear in the **Available files** group in a while.

---

To attach a file (group of files) to the map object, select it in the **Available files** group and press the **Attach >>** button.



The file (group of files) will move to the **Attached files** group. Press the **Apply** button to confirm the changes you have made.

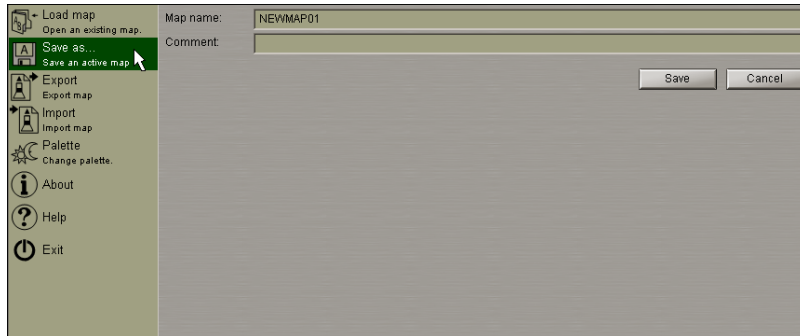
To detach a file (group of files), select the necessary files in the **Attached files** group and press the **<< Detach** button. The file (group of files) will move to the **Available files** group. Press the **Apply** button to confirm the changes you have made.

The procedure of creating and plotting a map object is completed.

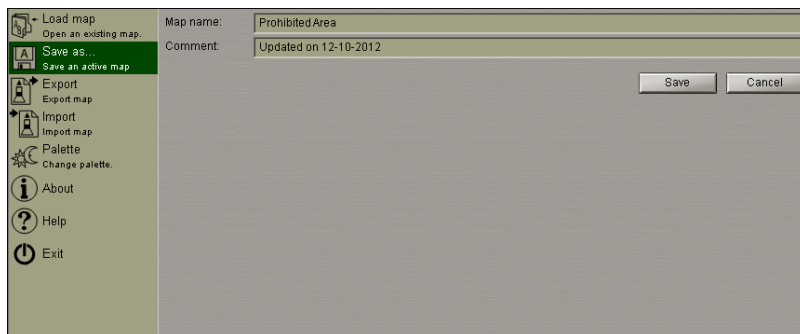
# Saving the Map

Use the procedure detailed above to create and plot the required number of map objects.

Press Transas button  and select **Save as** item from the drop-down menu.

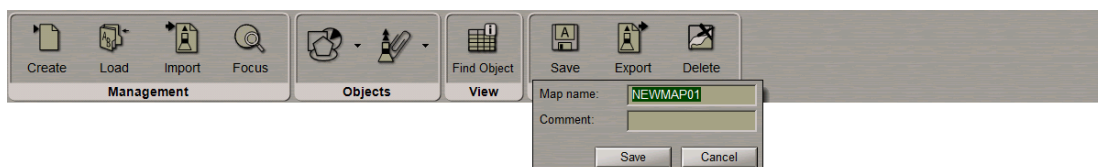


In the right-hand part of the menu, enter the map name and comments on the created map as required.



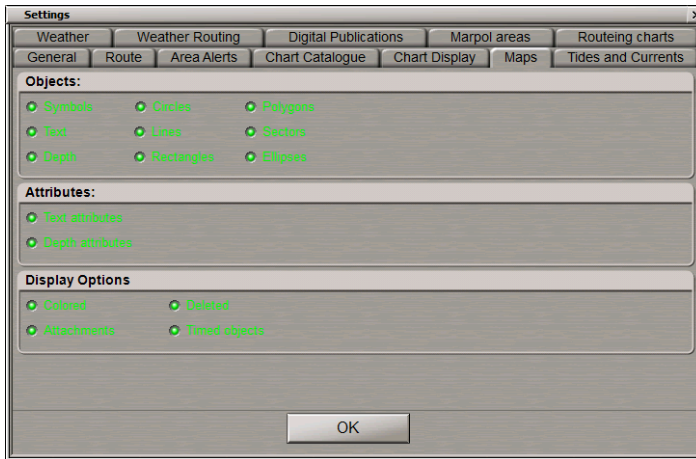
Press **Save** button: the map will be saved.

A similar result can be obtained by using the Ribbon. Press the **Save** button in the **Actions** group.



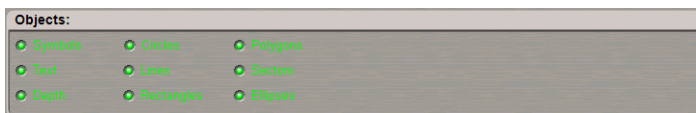
## Turning On/Off the Display of Map Objects and Their Attributes

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Maps** page.



To turn on/off the display of map objects categories on the Navi-Planner 4000 screen, press the following **Objects** buttons in **Show** group:

- Symbols;
- Text;
- Depth;
- Circles;
- Lines;
- Rectangles;
- Polygons;
- Sectors;
- Ellipses.



To turn on/off the display of map objects attributes on the Navi-Planner 4000 screen, press the following **Attributes** buttons in **Show** group:

- "Text" attribute;
- "Depth" attribute.





To turn on/off the display of map objects and its attributes on the Navi-Planner 4000 screen, press the following buttons in **Display options** group:

- **Colored** – to turn on the designated colour highlighting of all the map objects (if the button is released, objects are shown in orange);
- **Attachments** – to turn on the purple coloured highlighting of objects with attached files;
- **Deleted** – to turn on the grey coloured highlighting of deleted object;
- **Timed objects** – to turn on the display of temporarily appearing objects, if the button is depressed these objects are always visible, if it is released, they are not visible until they become effective.



## Map Loading and Unloading

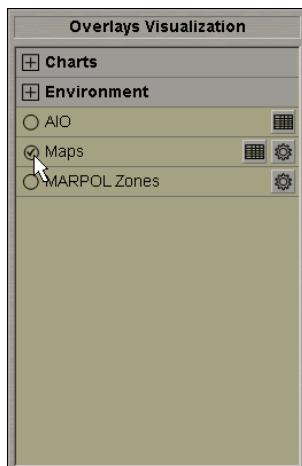
Press the button in the Task Selection Area to switch to the **Maps** task.



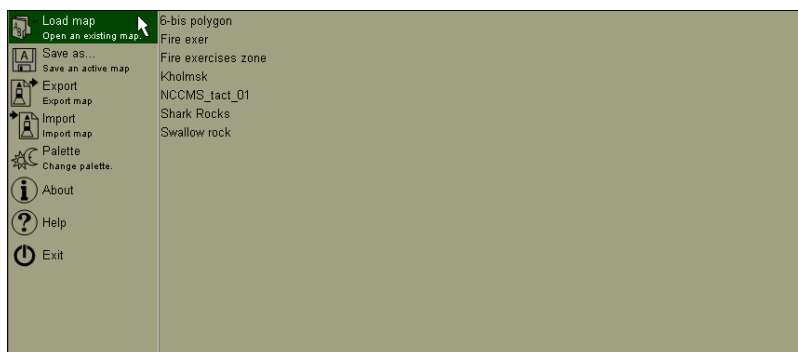
Press the button in the toolbar of the Chart Panel.



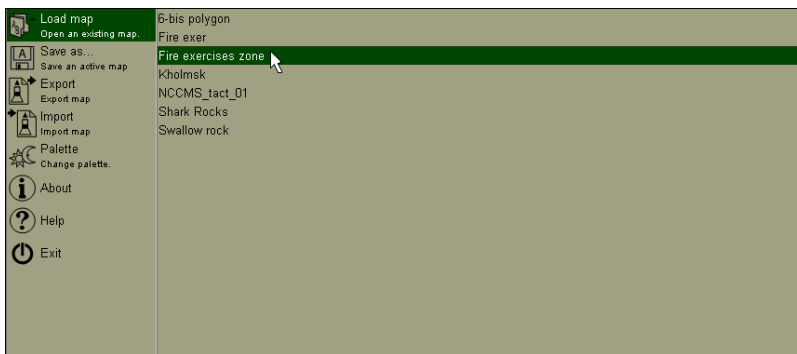
In the **Overlays Visualization** window check **Maps** checkbox.



Press the **Transas** button  and select **Load map** item from the drop-down menu.

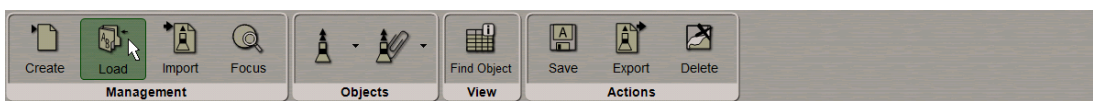


The right-hand part of the drop-down menu will display a list of all the maps available for loading.

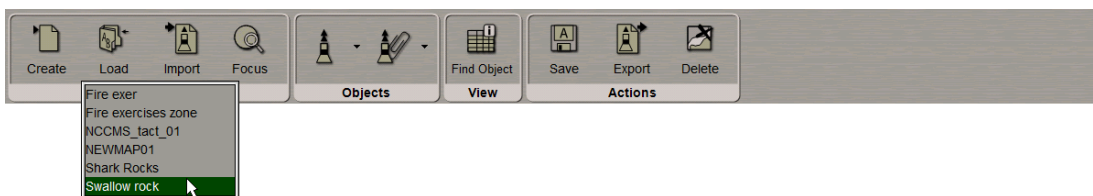


In the list, select the map required to be loaded in edition mode, and press the left trackball button.

A similar result can be obtained by using the Ribbon. Press the **Load** button in the **Management** group.



In the list, select the map required to be loaded in edition mode, and press the left trackball button.




The name of the loaded map is shown above the Ribbon:



Several maps can be loaded simultaneously in the editing mode. As a button with map name is pressed, the map becomes active and can be edited on the screen by using the graphic editor.

The active map objects displayed in the table on the **Find Object** table.

To unload the map press  button placed to the right of the map name in the **Maps** group, which is above the Ribbon:



## Editing Map Objects

**ATTENTION!** Point type objects cannot be displayed on scales smaller than 1:600,000.

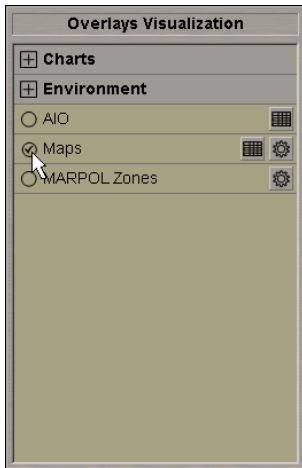
Press the button in the Task Selection Area to switch to the **Maps** task.



Press the button in the toolbar of the Chart Panel.



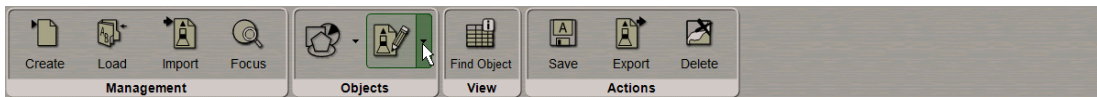
In the **Overlays Visualization** window check **Maps** checkbox.



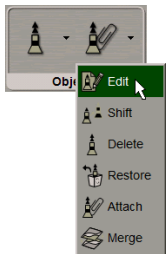
Load the map containing the object you are going to edit (see previous section). The screen will display presentations of the previously plotted map objects.

## Editing Map Object Attributes

In the Ribbon, press the button with arrow in the **Objects** group.



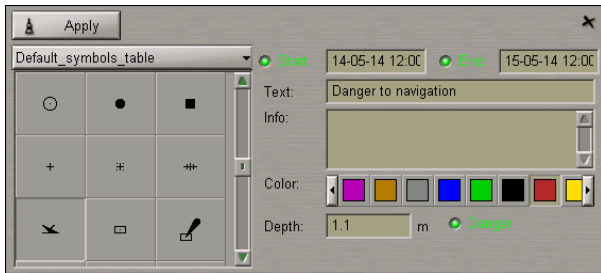
From the drop-down list select the **Edit** item.



Position the acquisition marker, which will appear, on the object (in case of text objects, the acquisition point is the first character) and press the left trackball button.



On the Navi-Planner 4000 screen will open up the window, which displayed attributes of the selected map object:



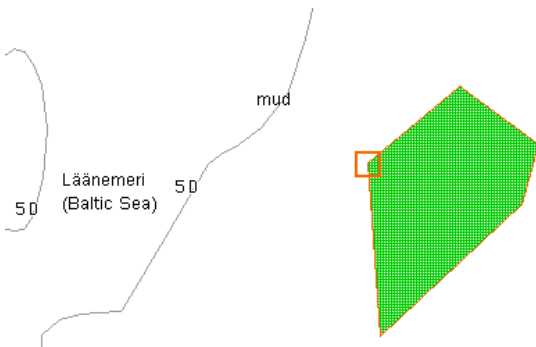
If necessary, edit the map object symbol, colour (the “Object colour” attribute), the map object display time (the “Temporary” attribute), map object text (the “Text” attribute), required information (the “Object information” attribute), the “Danger to navigation” attribute and the required depth value (the “Object depth” attribute) (see section *Creating and Saving Maps*, paragraph *Creating and Plotting Map Objects*, item *Plotting Symbol Type Objects*).

Press the **Apply** button in the editing window to confirm the changes you have made.

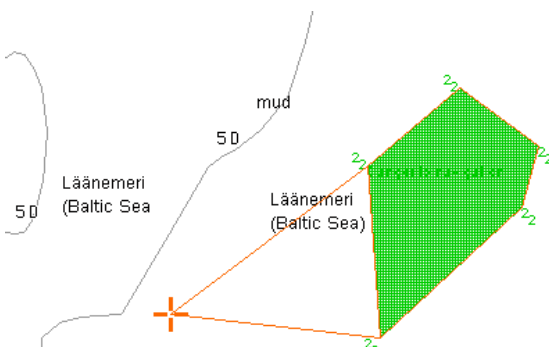
Attributes of the line, text, depth and shape type objects are edited in much the same way. To resize line or shape type objects, select this object as described above and press the **Resize** button in edition window.



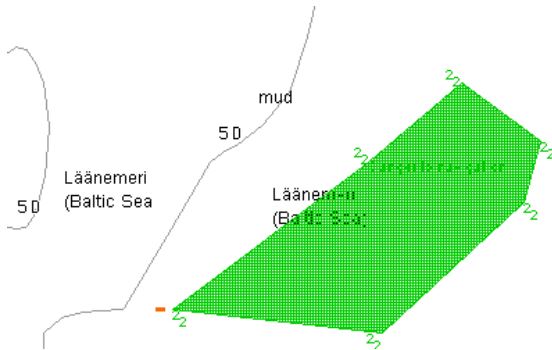
The acquisition marker will appear on the first point of the selected line object.



Use the acquisition marker to select a point on the line which should be changed, and press the left trackball button. The graphic cursor will appear.



Move the cursor to the required coordinates. Press the left trackball button. The graphic cursor will change its form to acquisition marker. Repeat this operation for other map object boundaries until the necessary configuration is set.



Press the right trackball button, all changes will be accepted.

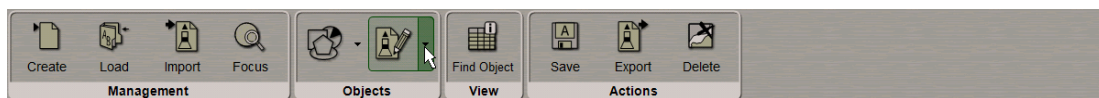
Edit all the necessary map objects.

To exit from the editing mode press the right trackball button.

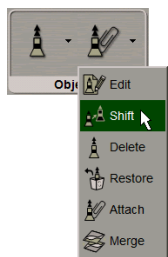
To attach/detach files to/from the map object, see section *Creating and Saving Maps*, paragraph *Creating and Plotting Map Objects*, item *Assigning "Attached File" Attribute*.

## Editing Map Object Coordinates

In the Ribbon, press the button with arrow in the **Objects** group.



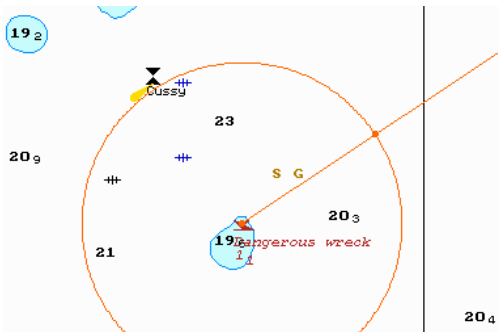
From the drop-down list select the **Shift** item.



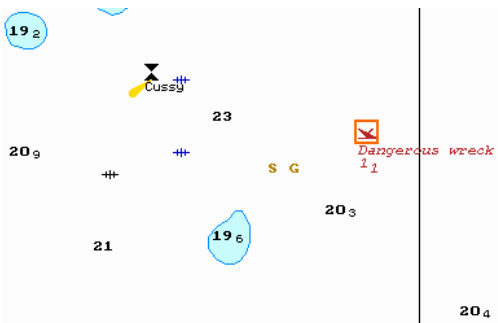
Position the acquisition marker which will appear, on the object to be shifted (the first character of a text object, or a point in a line, or area type object).



Press the left trackball button. Position the marker which will appear, in the new object coordinates within the displayed Chart Panel.



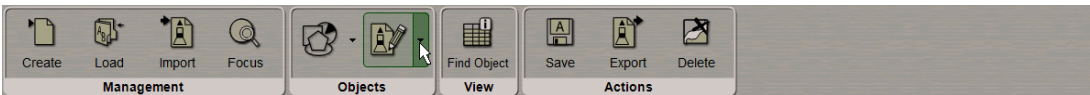
Press the left trackball button: the object will move to the specified coordinates.



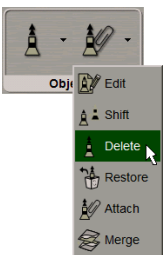
Press the right trackball button to exit from the mode of editing of the map object coordinates.

## Deleting the Map Object

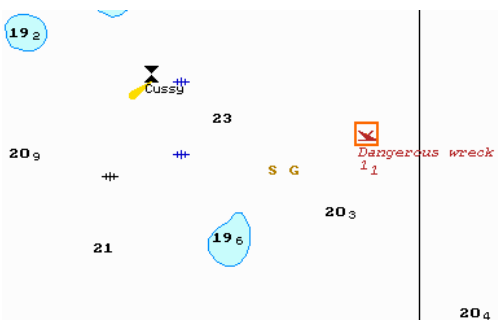
In the Ribbon, press button with arrow in the **Objects** group.



From the drop-down list select the **Delete** item.



Position the acquisition marker which will appear, on the object to be deleted (the first character of a text object, or a point in a line, or area type object).



Press the left trackball button: the presentation of the object will be removed from the Chart Panel.



Press the right trackball button to exit from the map object deleting mode.

## Restore Deleted Map Object

Press the button in the toolbar of the Chart Panel. The the **Settings** window will open up. Switch to the **Maps** page.

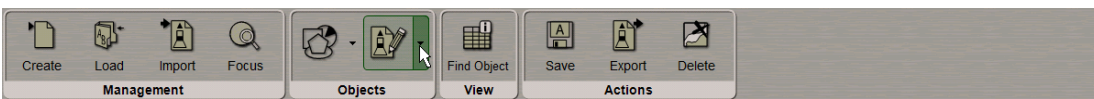


Check the **Deleted** checkbox in the **Display options** group to turn on the grey coloured highlighting of deleted object on the Navi-Planner 4000 screen (see also paragraph *Turning On/Off the Display of Map Objects and Their Attributes* of the previous section).

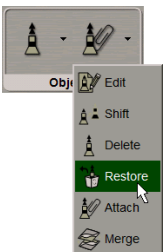
The screen will display all the previously deleted objects shown in the grey colour.



In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Restore** item.



Position the acquisition marker which will appear, on the deleted object (the first character of a text object, or a corner point of a line, or area type object).



Press the left trackball button: “Deleted object” attribute is removed, and the object is highlighted in accordance with the previously made settings.



Press the right trackball button to exit from the deleted map object restore mode.

## Merging Maps

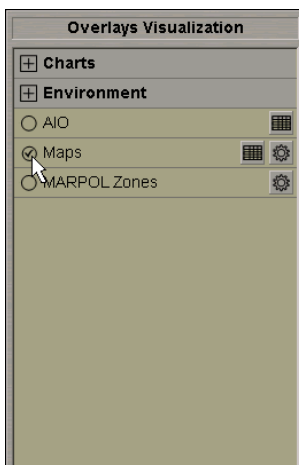
Press the button in the Task Selection Area to switch to the **Maps** task.



Press the button in the toolbar of the Chart Panel.



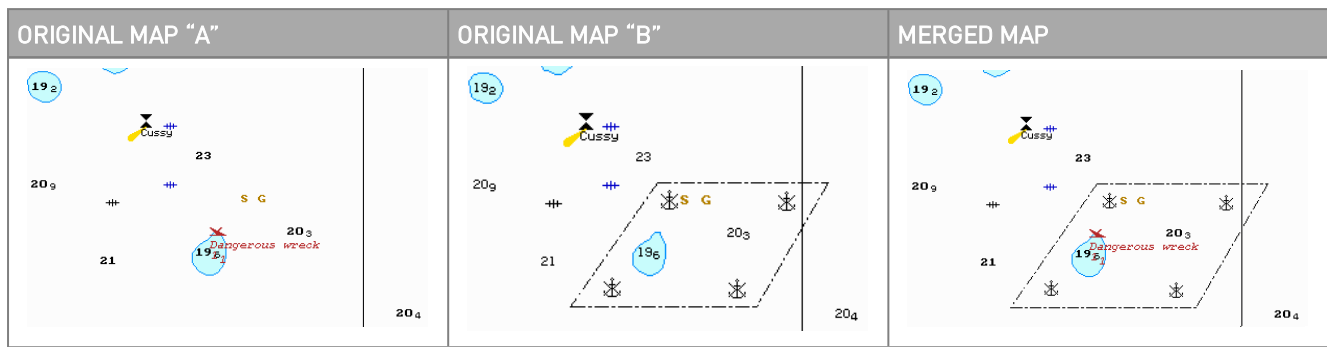
In the **Overlays Visualization** window check **Maps** checkbox.



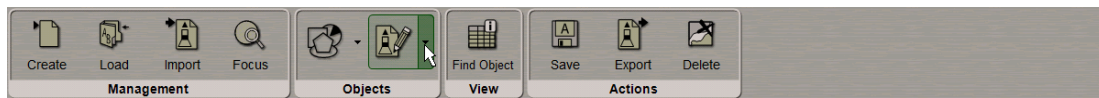
Load the map containing the object you are going to edit (see section *Map Loading and Unloading*). The screen will display presentations of the previously plotted map objects.



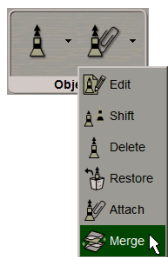
The merging of maps implies that a newly created map will contain map objects from all the merged maps:



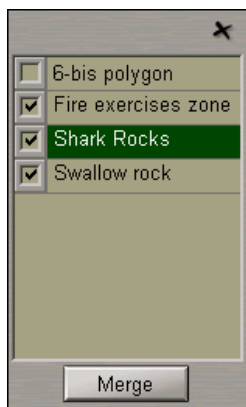
In the Ribbon, press the button with arrow in the **Objects** group.



From the drop-down list select the **Merge** item.



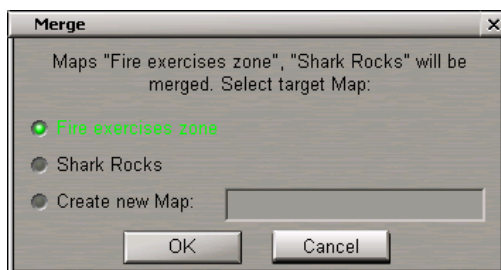
In the window which will open up, check the checkboxes next to the maps which should be merged.



In the window which will open up, check the checkboxes next to the maps which should be merged.

Press the **Merge** button.

If two maps are selected for merging, the **Merge** window which will open up will have the following form:



Select the name under which the merged map will be saved (under one of the source map names, or under a new name).

If more than two maps are selected for merging, the **Merge** window which will open up has the following form:



Enter the new map name. Press the **OK** button.

## Deleting Maps

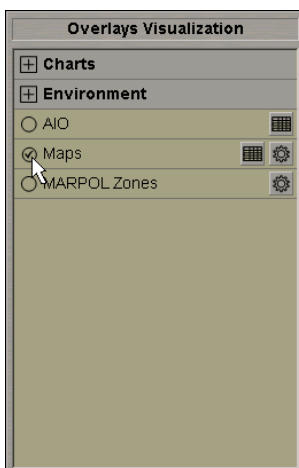
Press the button in the Task Selection Area to switch to the **Maps** task.



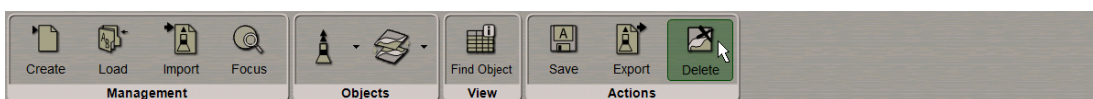
Press the button in the toolbar of the Chart Panel.



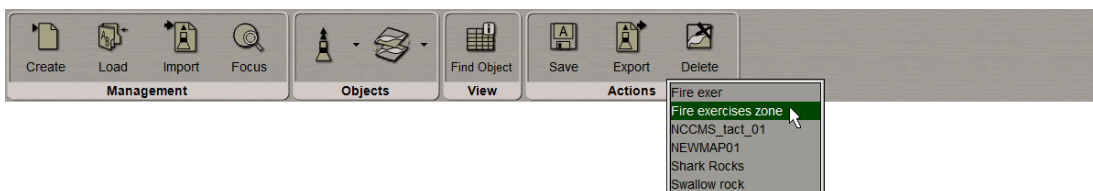
In the **Overlays Visualization** window check the **Maps** checkbox.



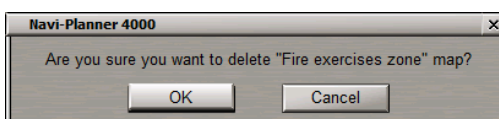
In the Ribbon, press the **Delete** button in the **Actions** group.



Select the chart name from the drop-down list, which will open up.



Press the left trackball button.



In the window, which will appear, press the **OK** button to confirm the deleting of the map. The chart will be deleted.

# Search for Map Objects

**ATTENTION!** Point type objects cannot be displayed on scales smaller than 1:600,000.

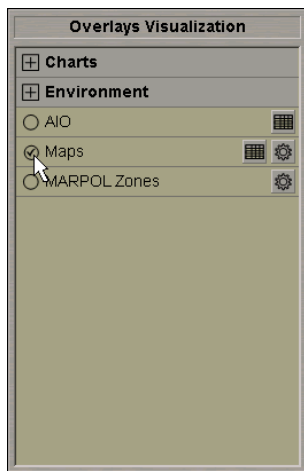
Press the button in the Task Selection Area to switch to the **Maps** task.



Press the button in the toolbar of the Chart Panel.

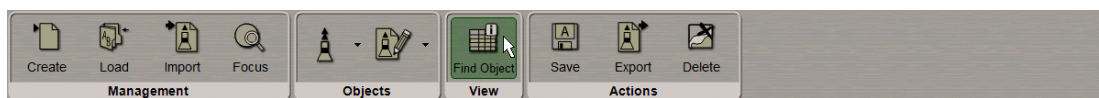


In the **Overlays Visualization** window check the **Maps** checkbox.



Load the map containing the object required to be found (see *Map Loading and Unloading* section). If the map is loaded select it in **Maps** group above the Ribbon to make it an active.

In the Ribbon, press the **Find object** button in the **Objects** group.

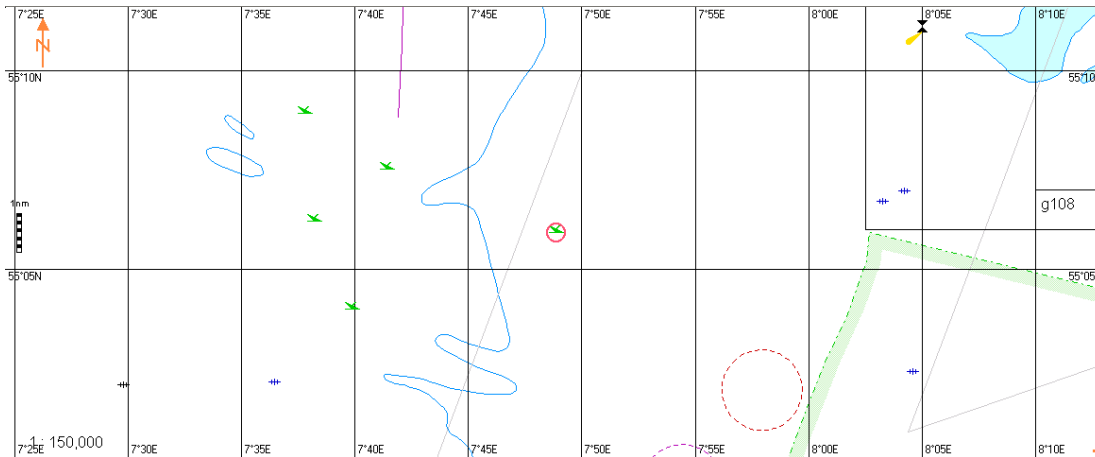


Information on the plotted map object will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

In the bottom part of the Navi-Planner 4000 screen, select the required map object in the left-hand part of the table, and press the left trackball button. Coordinates of the selected object will be displayed in the right-hand part of the table.

Type	Text	Info	Depth	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	! Danger to navigation		1.1 m	14-05-14, 12:00	15-05-14, 12:00	14-05-14, 14:22	58° 37.944 N 021° E
Depth	! Dangerous wreck		1.1 m			14-05-14, 14:25	
Text	!	Danger				14-05-14, 14:23	
Line	!					14-05-14, 14:22	
Polygon	!			14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:14	
Circle	!			14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:15	
Ellipse	!	Danger for navigation		14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:12	
Sector	!			14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:14	
Rectangle	!	Danger for navigation		14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:13	

A double click of the left trackball button on the selected object line or its coordinates displays this object in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.



With the selection of line or area type objects, the right-hand part of the table displays coordinates of all the points, which the line/area type object consists of.

Type	!	Text	Info	Depth	X	Start time (UTC)	Stop time (UTC)	Modified time (UTC)	Points
Symbol	!	Danger to navigation		1.1 m		14-05-14, 12:00	15-05-14, 12:00	14-05-14, 14:22	58° 36.597 N 021° E
Depth	!	Dangerous wreck		1.1 m				14-05-14, 14:25	58° 37.549 N 021° E
Text	!		Danger					14-05-14, 14:23	58° 36.704 N 021° E
Line	!							14-05-14, 14:22	58° 36.502 N 021° E
Polygon	!					14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:14	
Circle	!					14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:15	
Ellipse	!		Danger for navigation			14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:12	
Sector	!					14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:14	
Rectangle	!		Danger for navigation			14-05-14, 10:00	15-05-14, 10:00	14-05-14, 14:13	

A double click of the left trackball button on the coordinates of any point which the line/area type object consists of, displays this point in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.

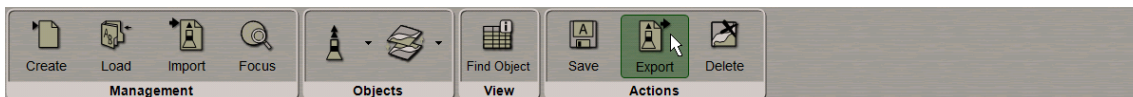
# Maps Export and Import

## Maps Export

Press the button in the Task Selection Area to switch to the **Maps** task.



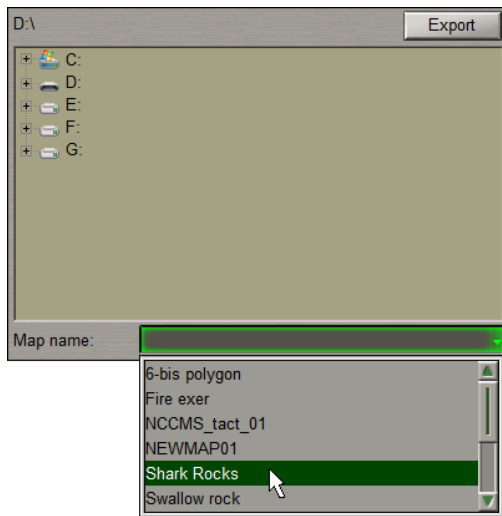
In the Ribbon, press the **Export** button in **Actions** group.



Specify the path, where the map will be exported.

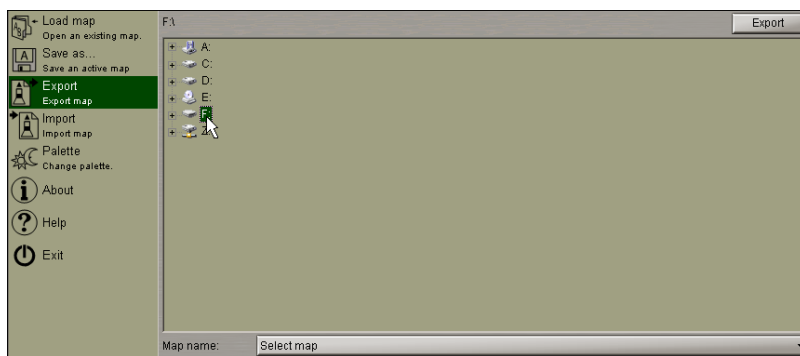


Select the chart, that is about to be exported.



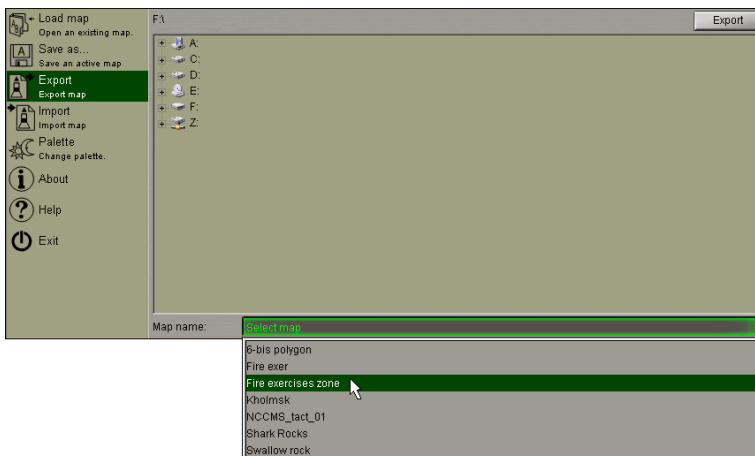
Press the **Export** button.

A similar result can be obtained by using the the  Transas button and select **Export** item from the drop-down menu.



In the right-hand part of the menu window specify the path, where the map will be exported.

Select the chart, that is about to be exported.



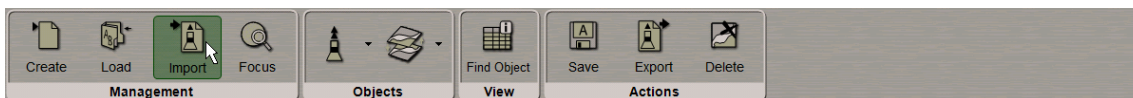
Press the **Export** button.

## Maps Import

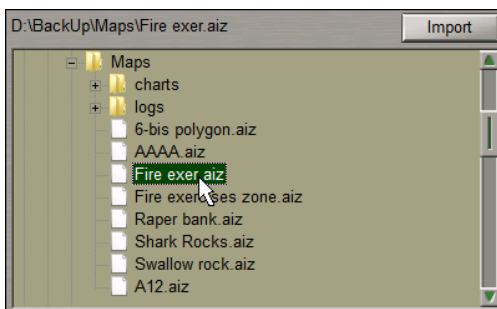
Press the button in the Task Selection Area to switch to the **Maps** task.




In the Ribbon, press the **Import** button in the **Management** group.

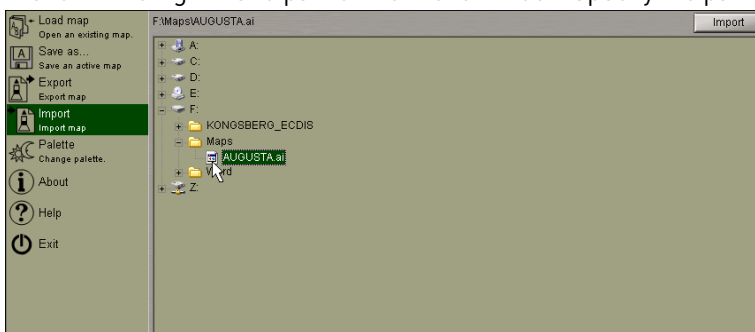


Specify the path, from where the map will be imported.



Press **Import** button.

A similar result can be obtained by using the  Transas button and select **Import** item from the drop-down menu. In the right-hand part of the menu window specify the path, from where the map will be imported.



Press **Import** button.

# Tides and Currents

This chapter describes the procedure used in the reception of all kinds of information about tides and currents.

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# Obtaining Information on the Change of Tidal Heights

Press the button in the Task Selection Area to switch to the **Charts & Data** task.

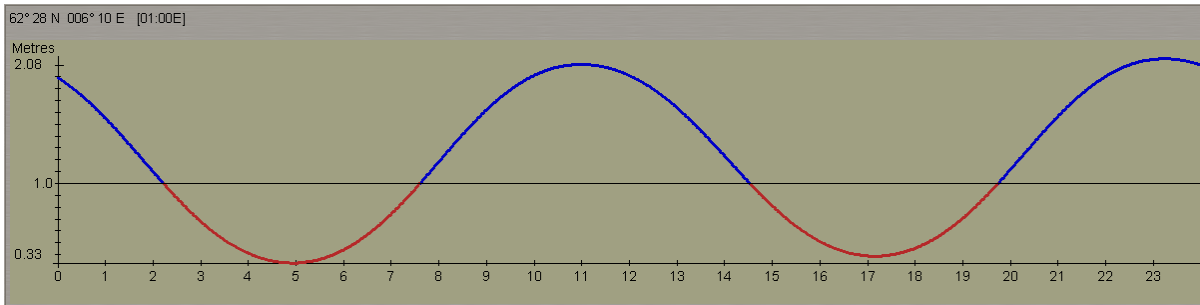


In the Ribbon, switch to the **Tide/Current** tab.



There are two presentations of the Tide and Current data:

- Graphically;



- In a Tabular Form.

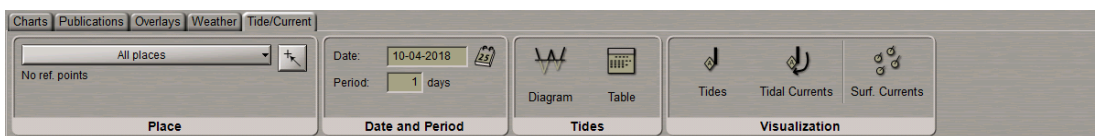
Heights of water in Metres for regular intervals  
**Aalesund**  
62° 28.000 N 006° 10.000 E  
SHIP'S TIME

06.10.2009	04:00	08:00	12:00	16:00	20:00
00:00	1.89	0.41	1.18	0.51	1.12
01:00	1.55	0.33	1.62	0.39	1.56
02:00	1.10	0.44	1.91	0.45	1.90
03:00	0.68	0.74	2.00	0.70	2.05

## Selecting Tide Reference Point

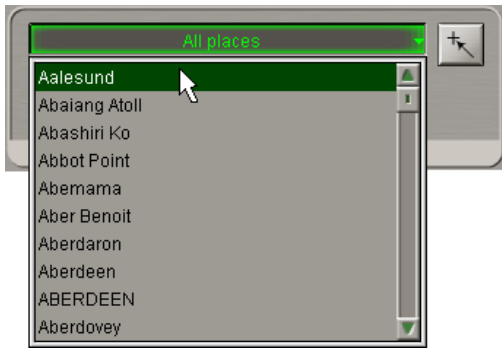
### Selecting Tide Reference Point from the List

In the Ribbon, switch to the **Tide/Current** tab. Press **All places** button in **Place** group.





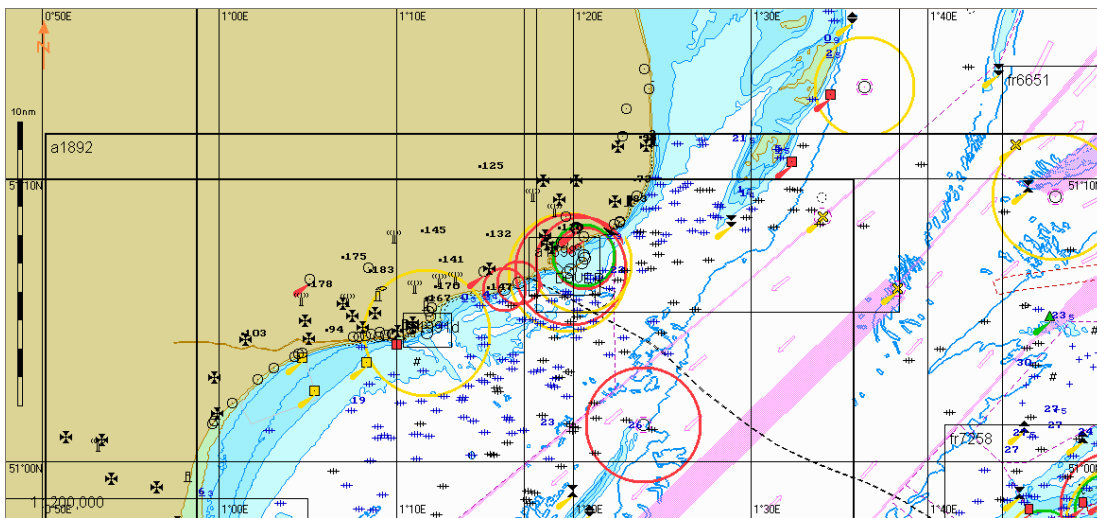
Select the reference point from the list by the cursor and press the left trackball button.



You can also use the keyboard: type the first letters of the reference point name.



Press <Enter> key. The selected reference point will be displayed in the centre of Chart Panel.



## Selecting Tide Reference Point with Graphic Cursor

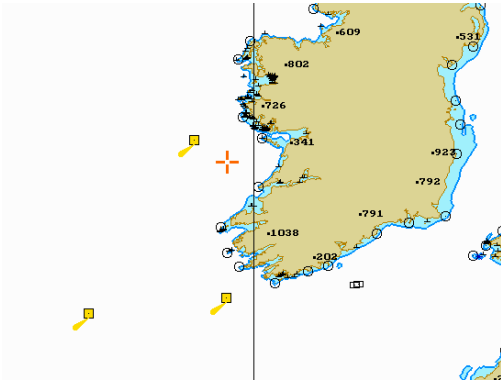
In the Ribbon, switch to the **Tide/Current** tab. Press  button in **Place** group.



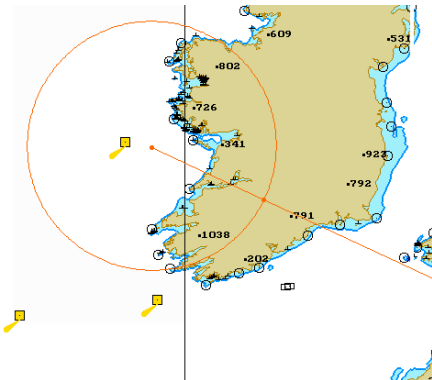
Graphic cursor will appear on the Chart Panel, whereas the right bottom part of the screen will display **cursor** information window.

cursor	
Latitude	53°01.935' N
Longitude	010°25.013' W
Ship position	
Bearing	249.6 °
Opp. Bearing	069.6 °
Range	1330.60 NM
Press Tab to edit manually	

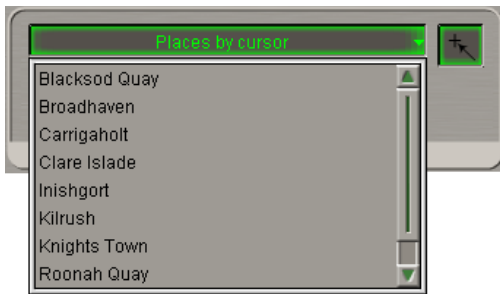
Position the graphic cursor which will appear, on the point within the Chart Panel.



The graphic cursor will acquire the ERBL form. Use the ERBL to set the necessary coverage zone.



Press the left trackball button to exit from the graphic cursor mode. Press **Places by cursor** button in **Places** group. In this case, the list displays reference points belonging to selected area.



Select the necessary reference point from the drop-down list as described in the previous item.

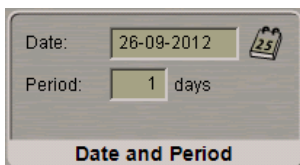
To return to the full list of reference points, press  button.


## Setting Tidal Height Calculation Parameters

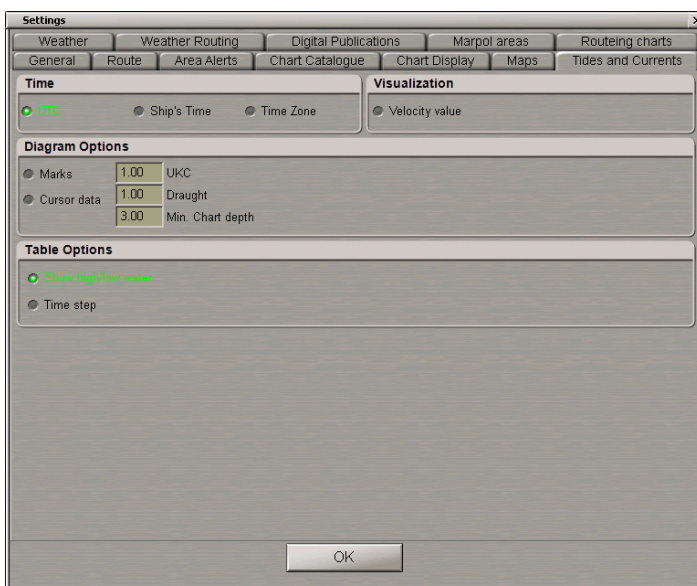
In the Ribbon, switch to the **Tide/Current** tab.



In **Date** field of **Date and Period** group select the date starting from which the tidal heights will be calculated. Use **Period** input field to enter the period which tidal heights are required to be calculated for.



Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to the **Tides and Currents** page. 



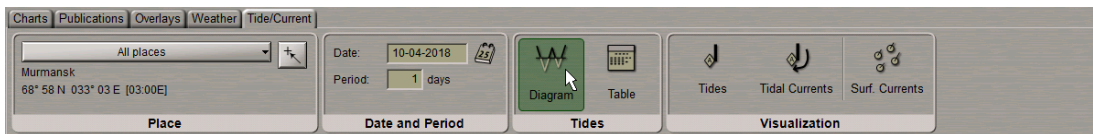
In the **Time** group, press the appropriate button to select time which will be taken into account in the tidal height calculations:

- UTC;
- Ship's time (valid if Navi-Planner 4000 is being used with MFD only);
- Time zone.

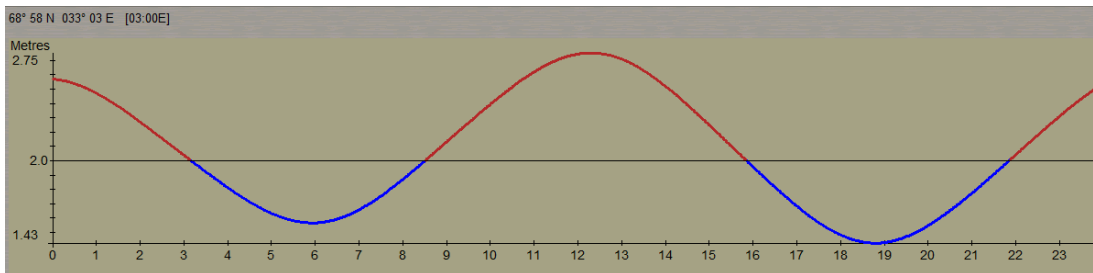
In the **Visualization** group check the **Velocity value** checkbox to display the digital values on the Chart panel.

## Information Displayed Graphically

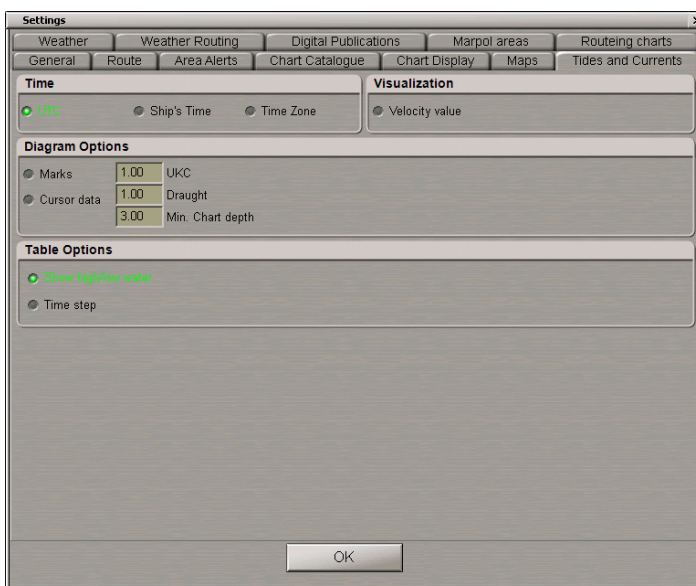
In the Ribbon, switch to the **Tide/Curent** tab. Press the **Diagram** button in the **Tides** group.



Tide diagram will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.



Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to the **Tides and Currents** page.



The following parameters can be set in the **Diagram options** group:

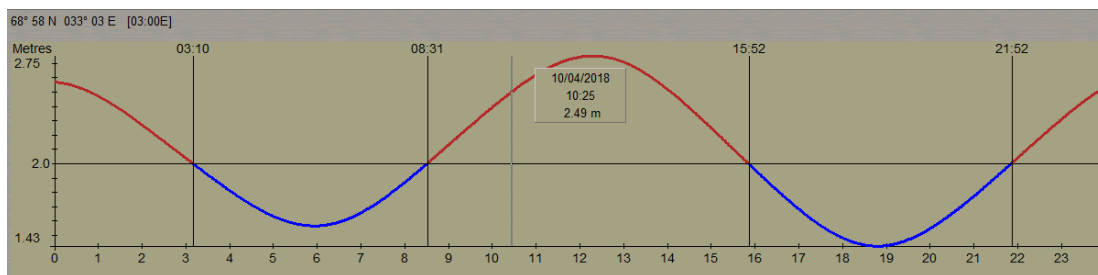
- **UKC** – under keel clearance;
- **Draught** – ship’s draught;
- **Min. Chart depth** – the minimum depth on the chart.

Check the **Marks** checkbox to show the time marks on the diagram.

Check the **Cursor data** checkbox.



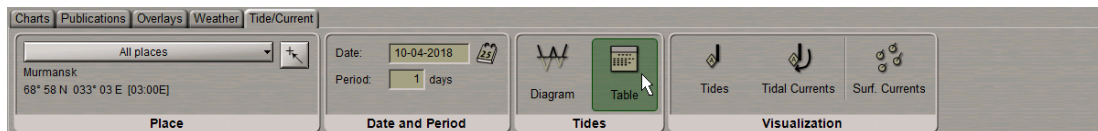
Position the cursor on the tidal curve and, by moving the cursor with the trackball, set the necessary time value in the cursor information window.



Read the tidal height value in the cursor information window.

## Information Displayed in a Tabular Form

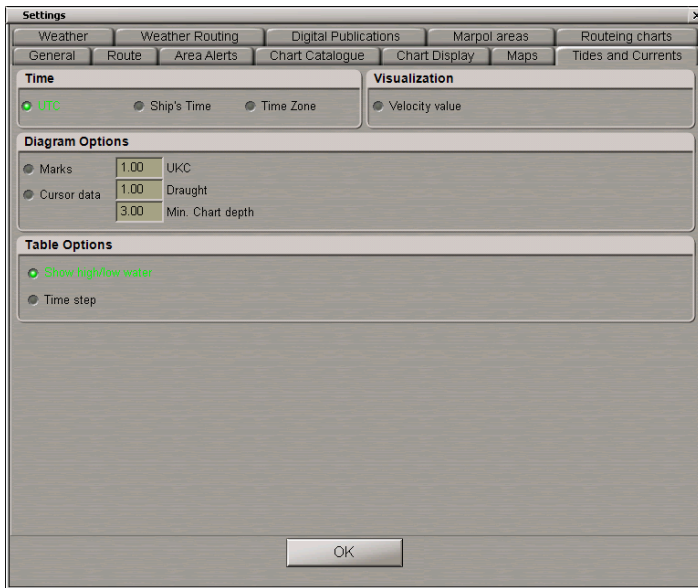
In the Ribbon, switch to the **Tide/Curent** tab. Press the **Table** button in the **Tides** group.



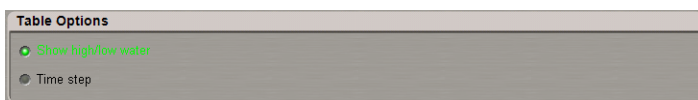
The **Tide** table will be displayed in the bottom part of the Navi-Planner 4000 screen.

Heights of water in Metres for regular intervals	
Murmansk	
68° 58.000 N 033° 03.000 E	
UTC TIME	
10.04.2018	
05:57	1.57
12:19	2.75
18:49	1.43


Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to the **Tides and Currents** page.



By default, the **Show high/low water** checkbox is checked in the **Table Options** group:



The table displays high and low waters.

In the **Table Options** group, check the **Time step** checkbox; press the  button in the activated line for the input of the tidal height calculations discretion.



In the list, which will open up, select the necessary tidal height calculation discretion and press the left trackball button. The table will display the tidal height table calculated with the set discretion.

Heights of water in Metres for regular intervals						
Mumansk						
68° 58.000 N 033° 03.000 E						
UTC TIME						
10.04.2018						
00:00	2.57	04:00 1.81	08:00 1.87	12:00 2.75	16:00 1.96	20:00 1.54
00:30	2.54	04:30 1.71	08:30 2.00	12:30 2.75	16:30 1.82	20:30 1.65
01:00	2.47	05:00 1.63	09:00 2.13	13:00 2.71	17:00 1.68	21:00 1.77
01:30	2.38	05:30 1.58	09:30 2.26	13:30 2.63	17:30 1.57	21:30 1.90
02:00	2.27	06:00 1.57	10:00 2.39	14:00 2.52	18:00 1.48	22:00 2.04
02:30	2.16	06:30 1.59	10:30 2.51	14:30 2.39	18:30 1.43	22:30 2.18
03:00	2.04	07:00 1.66	11:00 2.62	15:00 2.25	19:00 1.43	23:00 2.31
03:30	1.92	07:30 1.75	11:30 2.70	15:30 2.11	19:30 1.47	23:30 2.43

Take the necessary readings in the calculated tables.

# Display of Tidal Heights on the Chart Panel

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



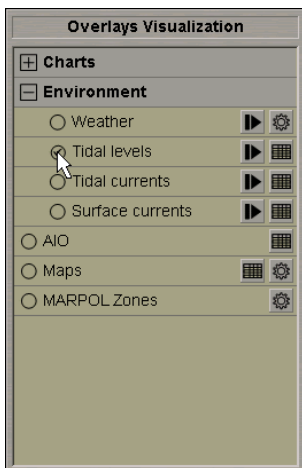
In the Ribbon, switch to the **Tide/Current** tab. Press the **Tides** button in the **Visualization** group.



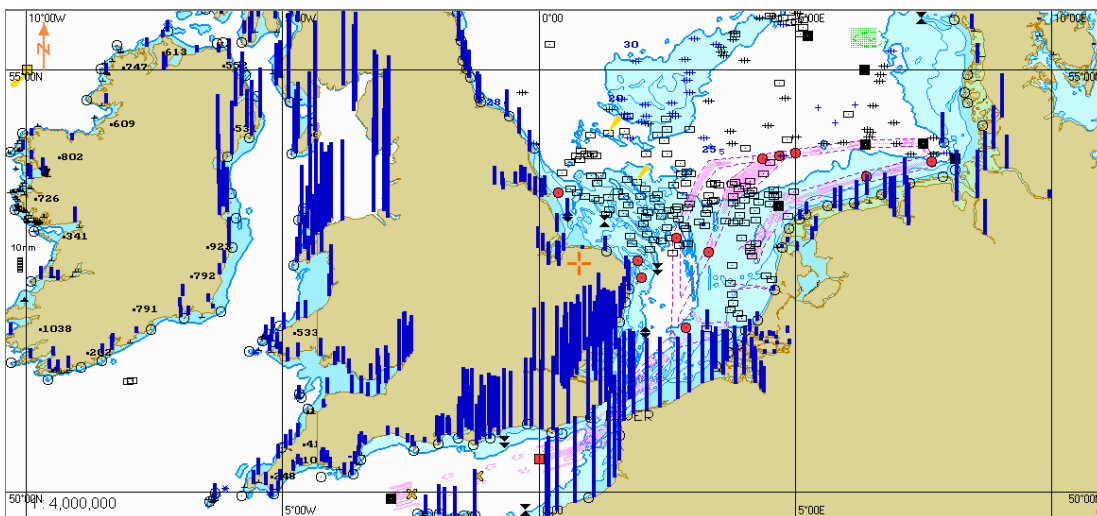
A similar result can be obtained by using the button in the toolbar of the Chart Panel.



In the **Overlays Visualization** window click on the **Environment** group to open it and check the **Tidal levels** checkbox.



The Chart Panel displays tidal heights in the reference points as of the current time.



# Obtaining Information on Tidal Currents

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



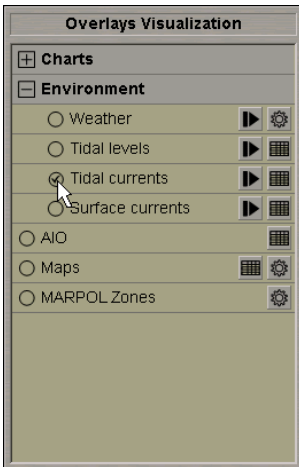
In the Ribbon, switch to the **Tide/Current** tab. Press the **Tidal currents** button in the **Visualization** group.



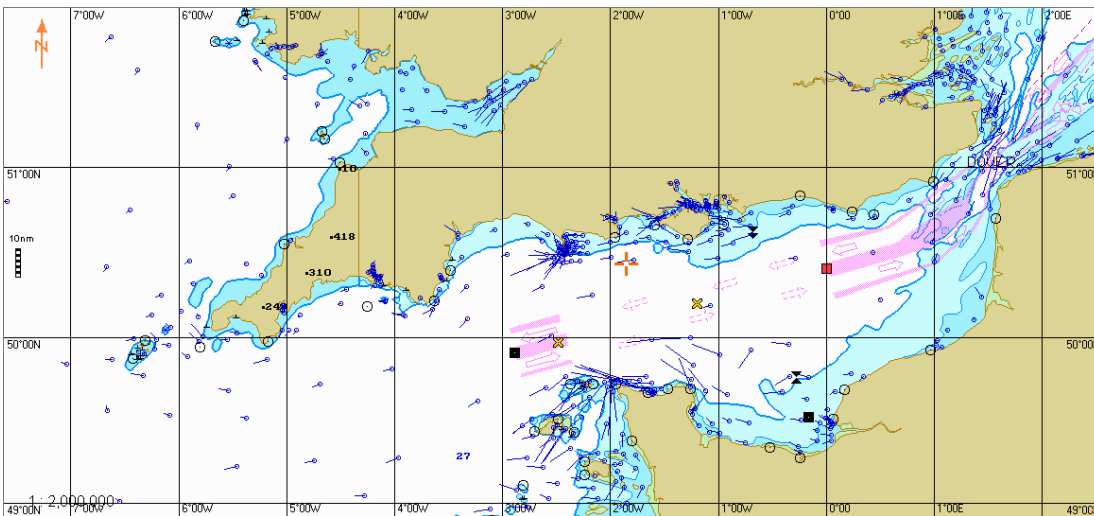
A similar result can be obtained by using the button in the toolbar of the Chart Panel.



In the **Overlays Visualization** window click on the **Environment** group to open it and check the **Tidal currents** checkbox.

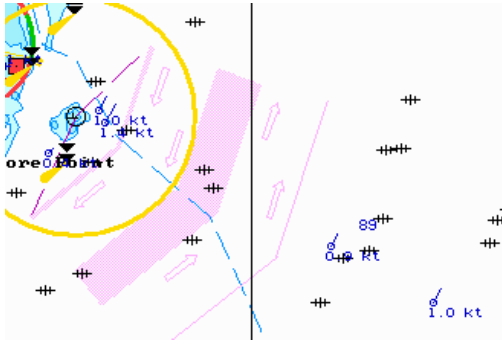


The Chart Panel displays tidal current vectors as of the current time.





If the **Velocity values** checkbox is checked on the **Tides and currents** page of the **Settings** window (see *Setting Tidal Height Calculation Parameters* paragraph above), the Chart Panel will display the digital values of tidal current speed.



## Obtaining Information on Surface Currents

Press the button in the Task Selection Area to switch to the **Charts & Data** task.



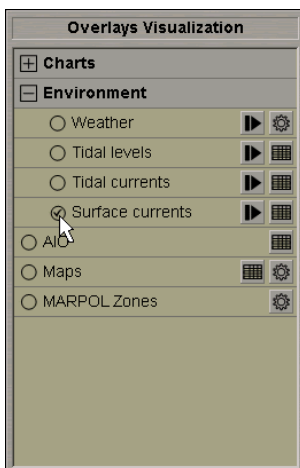
In the Ribbon, switch to the **Tide/Current** tab. Press the **Surface currents** button in the **Visualization** group.



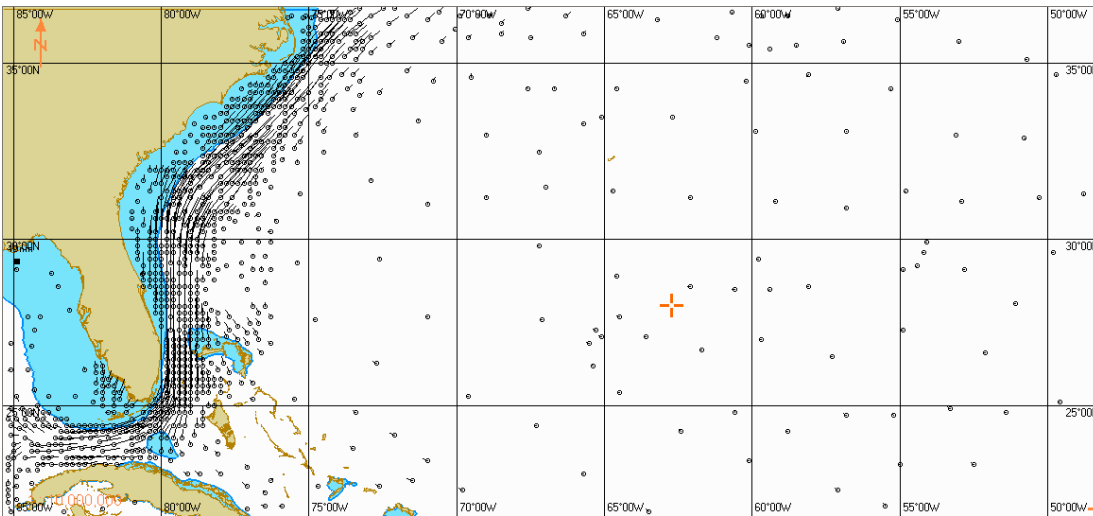
A similar result can be obtained by using the button in the toolbar of the Chart Panel.



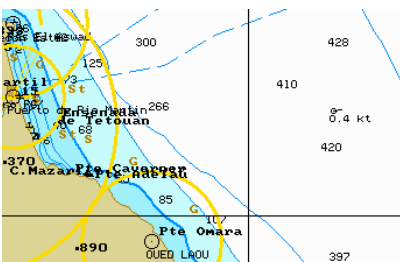
In the **Overlays Visualization** window click on the **Environment** group to open it and check the **Surface currents** checkbox.



The Chart Panel displays surface currents vectors as of the current time.



If the **Velocity values** checkbox is checked on the **Tides and currents** page of the **Settings** window (see *Setting Tidal Height Calculation Parameters* paragraph above), the Chart Panel will display the digital values of surface current speed.



## Use of Animation

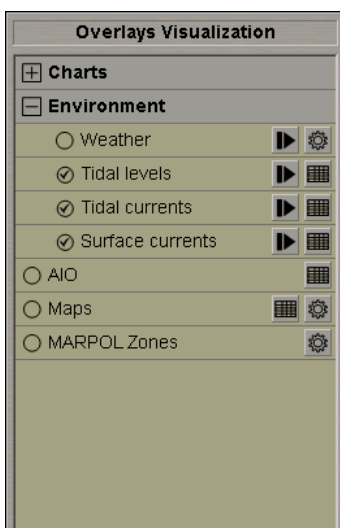
Press the button in the Task Selection Area to switch to the **Charts & Data** task.




Press the button in the toolbar of the Chart Panel.

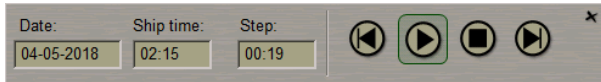


In the **Overlays Visualization** window check the checkboxes of the tidal parameters whose value change dynamics is required to be viewed.



Press the  button in the **Tidal levels** row.

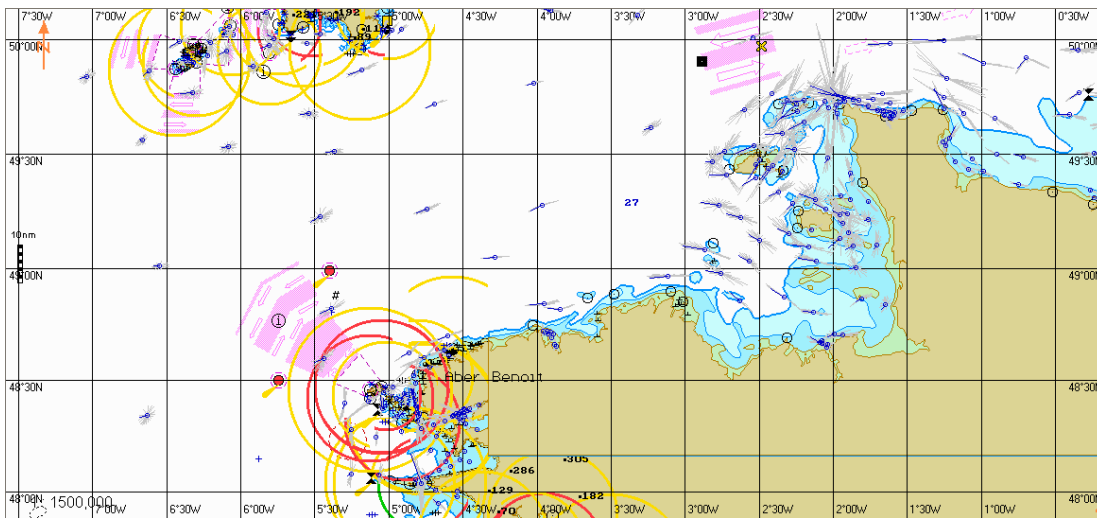
Animation control window will be displayed in the bottom part of the Navi-Planner 4000 screen.




In **Date** and **Ship time** input fields, enter the required viewing start date and time.

Use **Step** input field to enter the discretion of the parameter value change.

The changes are happened automatically  and manually: back  and forward .





On the Chart Panel, the selected parameters will change with the set discretion.

The same kind of animation can be made for the Surface currents. Press the  button in the **Surface currents** row in the **Overlays Visualization** window.

Animation control window will be displayed in the bottom part of the Navi-Planner 4000 screen.



Use  and  buttons to view change in the surface currents month-by-month.

# Weather Forecasts

This chapter describes the procedure used in the ordering and processing of weather forecasts used by the Navi-Planner 4000.

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<b>Obtaining Information on Weather Parameters</b> .....	<b>197</b>
<b>Weather under Cursor</b> .....	<b>200</b>
<b>Weather Graphs</b> .....	<b>200</b>

# Obtaining Information on Weather Parameters

**WARNING!** Weather data is obtained automatically during the voyage weather-associated optimizing and is updated twice in 24 hours. (see *Chapter 3*, section *Optimization of Voyage in View of Weather Forecast!*).

Press the button in the toolbar of the Chart Panel. The **Settings** window will open up. Switch to **Weather** page.



	Fill	Contour	Grid/Arrow	Labels	Step	Range, from	Arrow size	Color
Pressure, hPa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	900		<input type="color" value="blue"/>
Wind, kn	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	0		<input type="color" value="grey"/>
Sign. Wave Height, m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.5	0.0		<input type="color" value="blue"/>
Surface currents, kn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.4	0.0		<input type="color" value="black"/>
Wind Sea, m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.5	0.0		<input type="color" value="green"/>
Wind Sea Period, s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	0		<input type="color" value="blue"/>
Swell, m	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.5	0.0		<input type="color" value="blue"/>
Swell Period, s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	0		<input type="color" value="green"/>
Sea Temperature, C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	-1		<input type="color" value="yellow"/>
Air Temperature, C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	-40		<input type="color" value="yellow"/>
Tropical cyclones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Restore Default Ranges

Weather NoGo Areas (based on the weather restrictions)

OK

Check (if unchecked) **Fill**, **Contours** and **Grid/Arrow** checkboxes of weather parameters required to be displayed.

Check the **Labels** checkbox for display value labels to the arrows.

Use the **Range** input box to specify the from range for the display of weather parameters.

Set the **Arrow Size** slider in one of the 5 positions to set the arrow size.

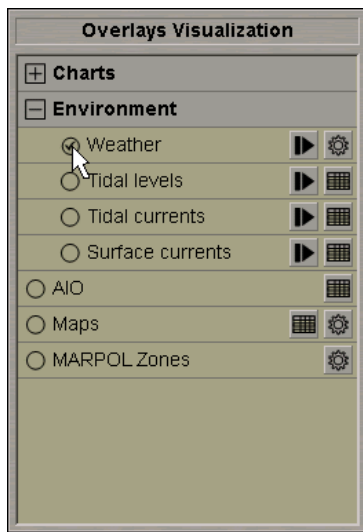
Specify step and colour for each parameter.

Check the **Weather NoGo Areas (based on the weather restrictions)** checkbox for the chart panel to display areas in which weather parameters exceed those set on the **Weather Routing** page. (see *Chapter 3*, section *Presettings for Voyage Optimization*, paragraph *Weather Restrictions Settings*).

Press the button in the toolbar of the Chart Panel.

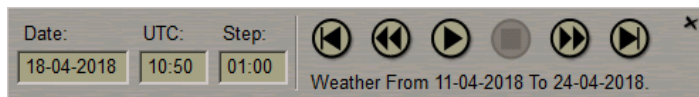


In the **Overlays Visualization** window click on the **Environment** group to open it and check the **Weather** checkbox.



Press the  button in the **Weather** row.



Animation control window will be displayed in the bottom part of the Navi-Planner 4000 screen.

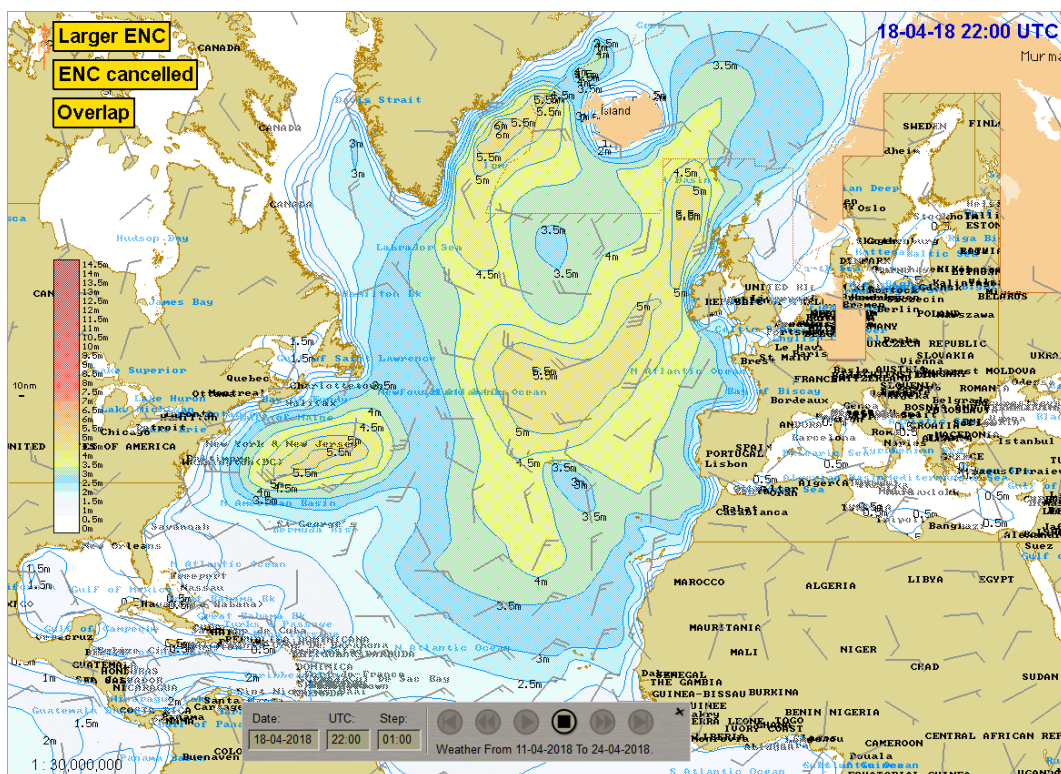


In the **Date** and **UTC** input fields, enter the required viewing start date and time.

Use the **Step** input field to enter the discretion of the weather forecast value change.


The changes are happened automatically  and manually: back  and forward .

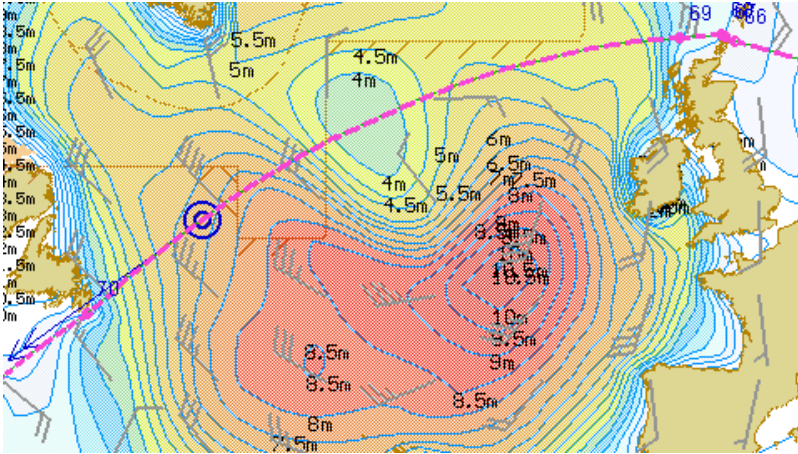
The  and  buttons serve for moving to the beginning or to the end of the weather forecast.



If it is necessary replay the changes of weather parameter along the route, load the necessary route (see *Chapter 2, section Route Loading and Unloading*). Load the necessary schedule (see *Chapter 2, section Drawing Schedule*).

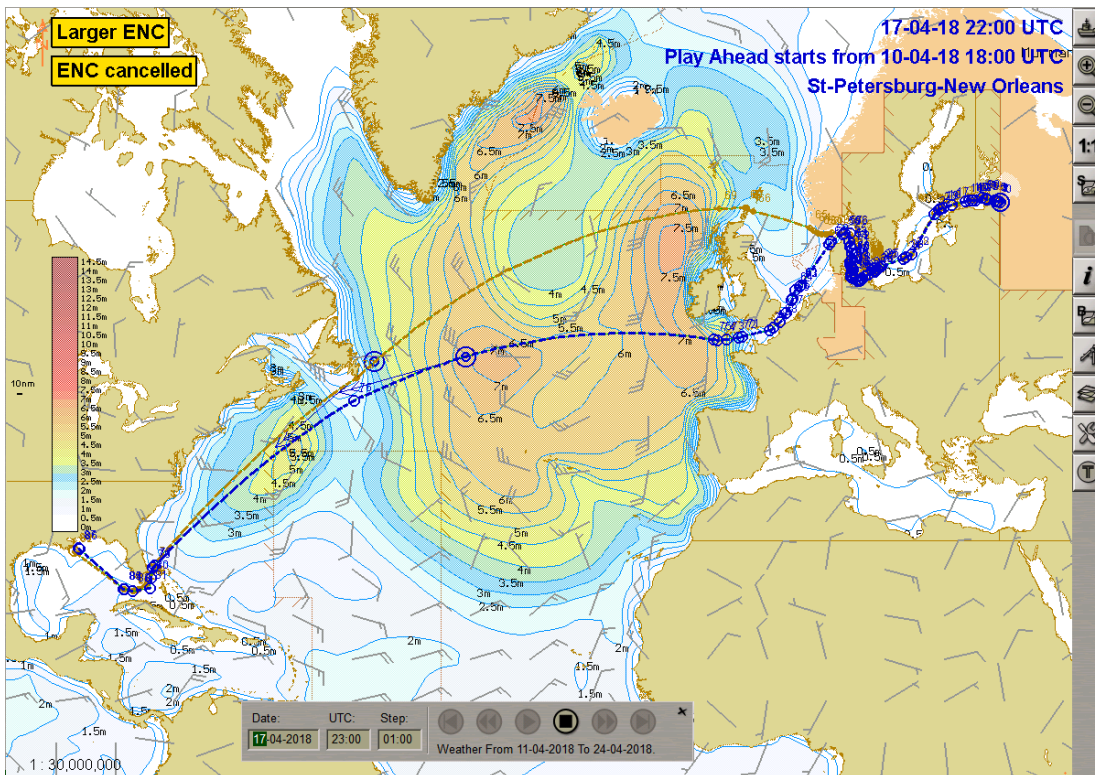
NOTE: The selected schedule should be at least partly coincident in dates with the replayed weather forecast.

Press the  button to replay changes of weather parameters.



The Chart Panel will display the own ship symbol moving along the selected route according to the selected schedule with the changing weather parameters in the background.

Where several routes and/or schedules are loaded in the **Route** task, weather prediction will be made for all the routes and their active schedules.



# Weather under Cursor

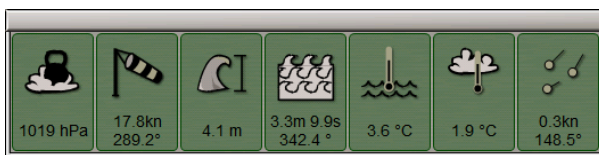
Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon, switch to the **Weather** tab. Press the **Weather Cursor** button in the **Options** group.



Weather tool bar will appear



While the **Weather Cursor** button is pressed, all weather parameters at the cursor position are displayed in the Weather tool bar. By moving the trackball over the chart the spot weather forecast will be seen in the Weather tool bar. The displayed data are valid for the same time as set for regular weather display.

The Weather tool bar is canceled by clicking on the **Weather Cursor** button again or when the tab is switched to another.

# Weather Graphs

**WARNING!** Weather graphs will be displayed for loaded routes and those active schedules. The schedules should be within the weather forecast time period.

Press the button in the Task Selection Area to switch to the **Charts & Data** task.

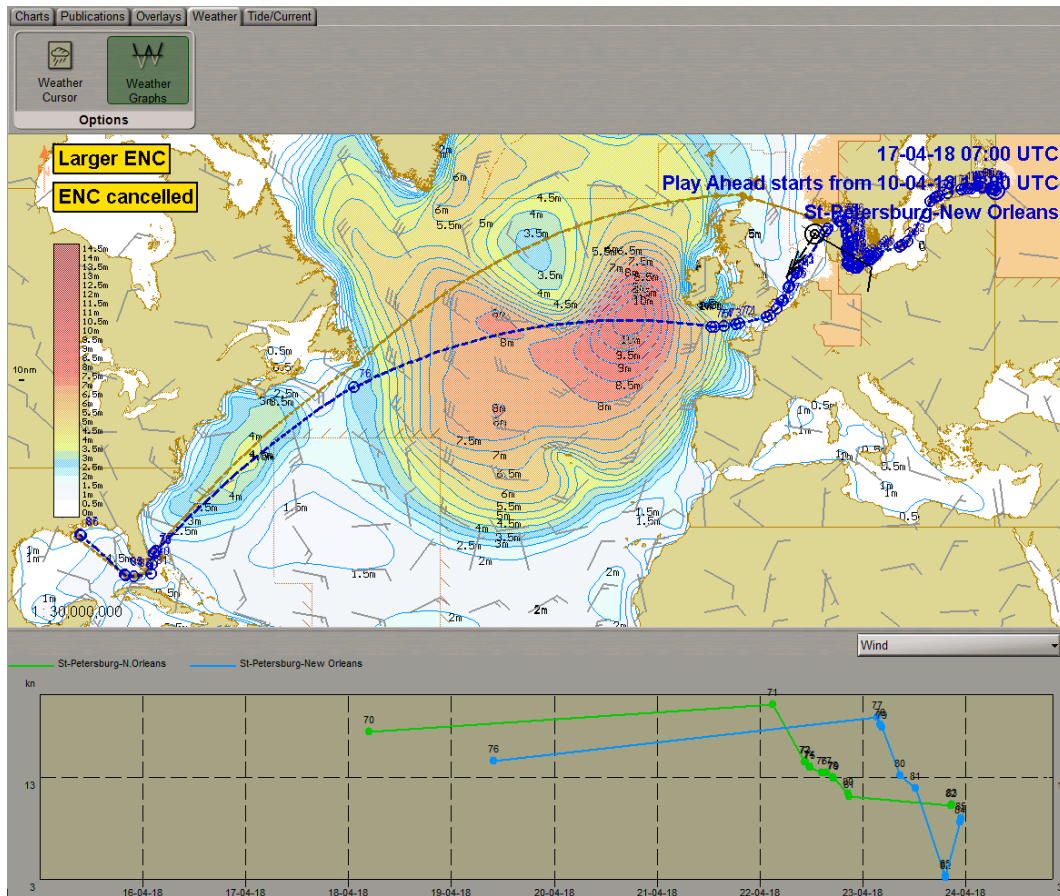


In the Ribbon, switch to the **Weather** tab. Press the **Weather Graph** button in the **Options** group.



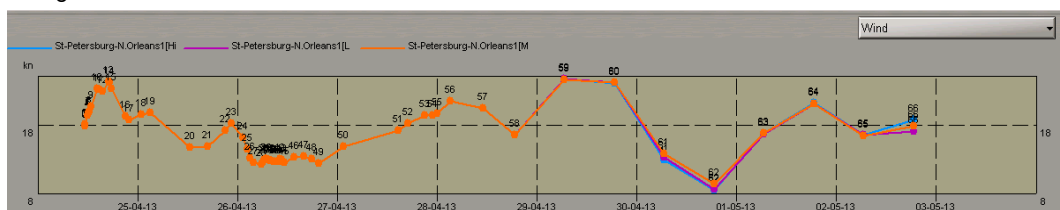


The graphs will be displayed at the bottom part of the display. At the same time graphs for all the loaded routes will be displayed in different colours.



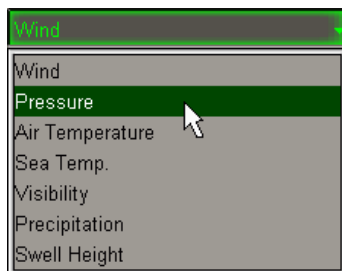
The graphs offer the user the opportunity to look at calculated results in detail. It gives a clear picture per element for all calculated routes.

The graphs can be used to analyse why the speed on one route is higher/lower than on other routes (e.g. because of high waves).



The vertical axis of the graphs is set automatically based on the calculated results. The horizontal axis shows the date/time of the routes.

Weather parameters can be changed at the top right part of the graph.



# Admiralty Digital Publication

This chapter describes the procedure used in the ordering and processing of Handling of Admiralty Digital Publication used by the Navi-Planner 4000.

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<b>General</b> .....	<b>203</b>
<b>Admiralty Digital Publication Display Setup</b> .....	<b>204</b>
<b>Obtaining Information on Admiralty Digital Radio Signals Volume 1,3,4,5</b> .....	<b>204</b>
<b>Obtaining Information on Admiralty Digital Radio Signals Volume 2</b> .....	<b>209</b>
<b>Obtaining Information on Admiralty Digital Radio Signals Volume 6</b> .....	<b>214</b>
<b>Obtaining Information on Admiralty Digital List of Lights</b> .....	<b>218</b>

# General

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**WARNING!** The Admiralty Digital Publication data cannot be displayed and used unless this option is additionally licensed.

---

**WARNING!** The Admiralty Digital Publications are installed by the service engineer at the installation stage and is updated automatically in the course of operation.

---

The Admiralty Digital Publication (ADP) functionality permits the following data to be ordered and displayed by using Navi-Planner 4000:

- Admiralty Digital Radio Signals volume 1,3,4,5 [ADRSv1345]
- Admiralty Digital Radio Signals volume 2 [ADRSv2];
- Admiralty Digital Radio Signals volume 6 [ADRSv6];
- Admiralty Digital List of Lights [ADLL];
- Admiralty Total Tide.

Admiralty Digital Radio Signals volume 1,3,4,5 (ADRS 1,3,4,5) assists the mariner in routine radio communications, receiving and providing weather reports and safety information, pollution and quarantine reporting, seeking for Telemedical Assistance Services (TMAS) and provides detailed procedures in the event of a distress or SAR incident.

Admiralty Digital Radio Signals volume 2 (ADRS 2) provides a range of regularly updated and compliant, digital positional and timekeeping references:

- Listing of VHF radio-direction-finding stations;
- Worldwide listing of radar beacons (Racons and Remarks);
- Identification System (AIS) Aids to Navigation (AtoN);
- Worldwide listing of radio beacons transmitting DGPS corrections;
- International radio time signal broadcast details.


Admiralty Digital Radio Signals Volume 6 provides maritime radio communications information for pilot services, vessel traffic services and port operations worldwide. More than 3000 service locations are updated quickly and efficiently online every week.

The Admiralty Digital List of Lights provides light and fog signal information for more than 70,000 unique light structures worldwide. Users can get weekly updates by email or access the information online as soon as it becomes available.

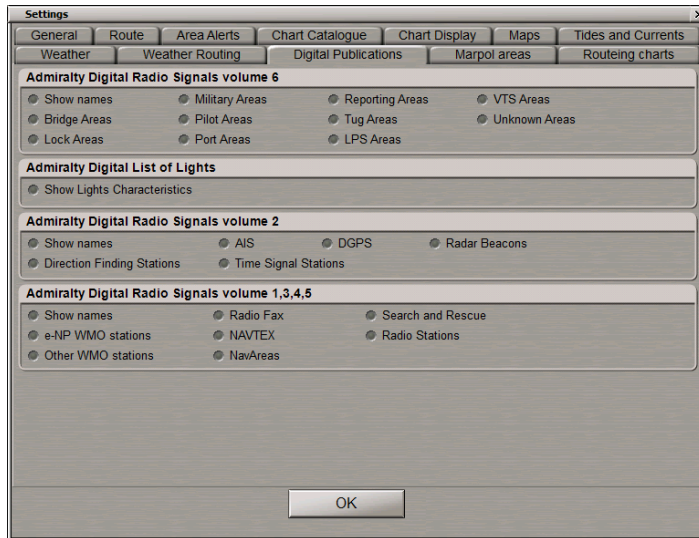
The Admiralty Total Tide is the world's most comprehensive tidal prediction program, which provides fast, accurate tidal height and tidal stream predictions. It contains tidal information for over 7,000 ports and more than 3,000 tidal stream stations worldwide.

For this functionality to operate, the Admiralty Digital Publication software is required to be installed on the WS. The software can be found in the appropriate TPT (Transas Planning Tools) media.

# Admiralty Digital Publication Display Setup

Press the  button in the toolbar of the Chart Panel.

The **Settings** window will open up. Switch to the **Digital Publication** page.




In the **Admiralty Digital Radio Signals volume 2** group check the checkboxes next to the names of the objects which will be shown on the Navi-Planner 4000 screen when the ADRS2 layer is turned on.

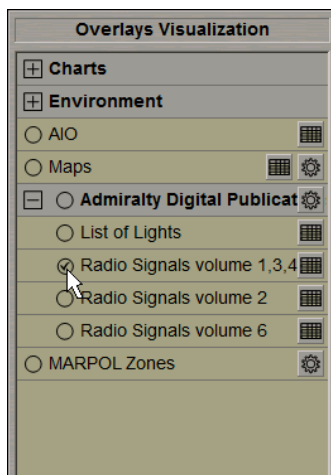
In the **Admiralty Digital Radio Signals volume 6** check the checkboxes next to the names of the objects which will be shown on the Navi-Planner 4000 screen when the ADRS6 layer is turned on.

In the **Admiralty Digital List of Lights** group check the **Show Lights Characteristics** checkbox to display characteristics of lights on the Navi-Planner 4000 screen when the ADLL layer it turned on.

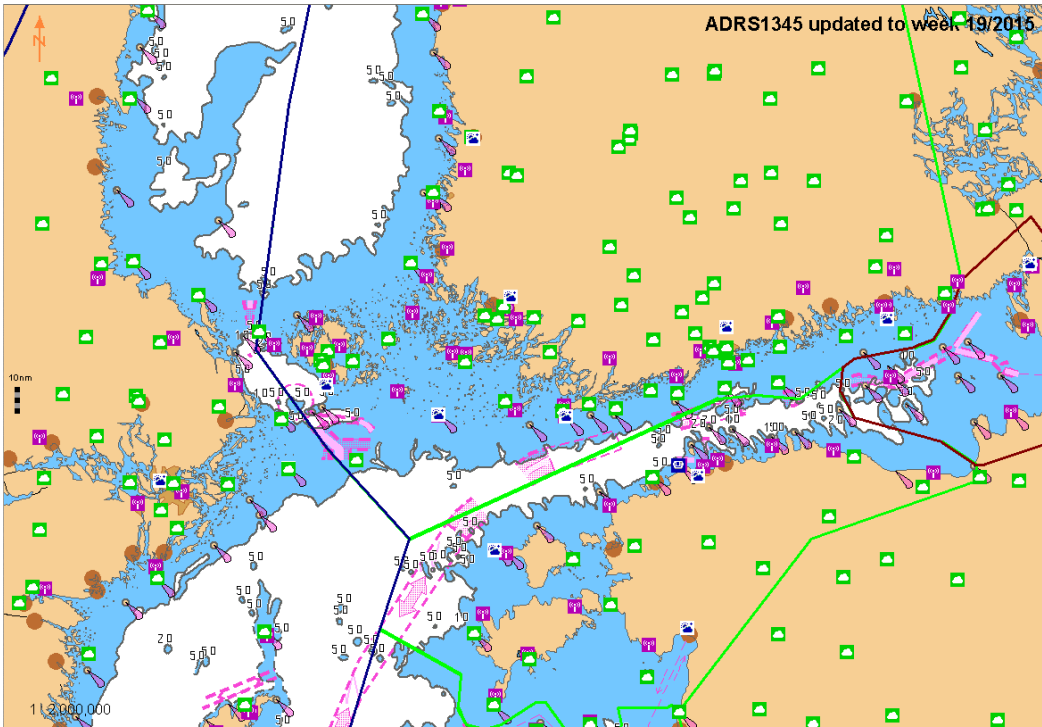
## Obtaining Information on Admiralty Digital Radio Signals Volume 1,3,4,5

For the radio station symbols to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel. 

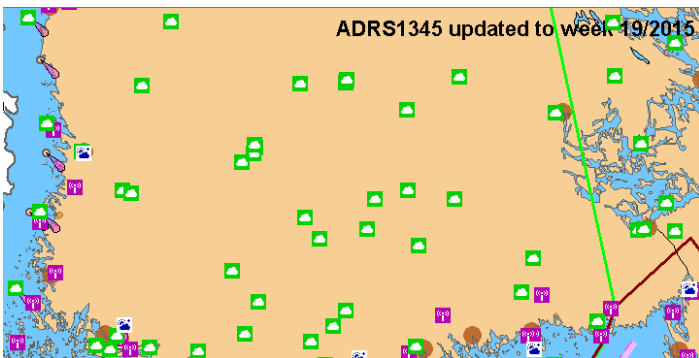
In the **Overlays Visualization** window click on the **Admiralty Digital Publications** group to open it and check the **Radio Signals vilume 1,3,4,5** checkbox.



The Chart panel will display the ADRS1345 symbols (if these were turned on in the **Settings** window, see paragraph *Admiralty Digital Publication Setup*):



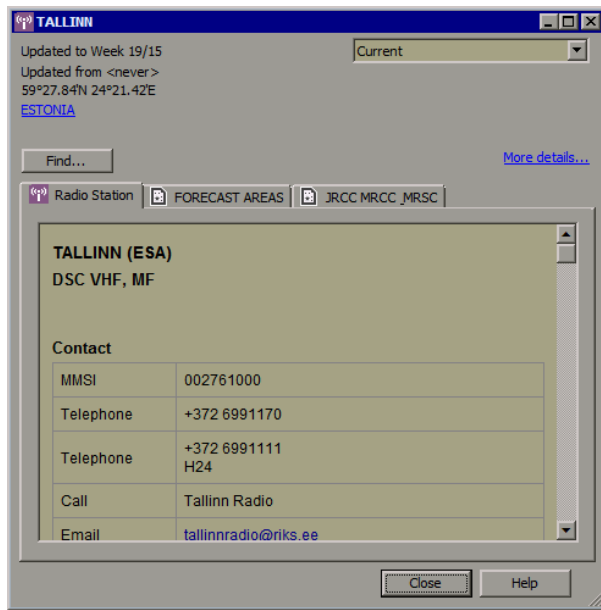
The top right corner of the Chart Panel shows the displayed ADRS1345 data status, i.e., the week which it has been updated for.









To obtain information on the necessary radio station, position the free cursor on its symbol; the cursor will change its form.



Press the left trackball button: the Information data card will be displayed next to the radio station symbol:



The table below shows symbols for each station type:

	NAVTEX;
	e-NP WMO stations;
	Other WMO stations;
	Reporting Information;
	Radiostations;
	Radio Fax
	NAV Areas (area limits are shown on the chart);
	Search and Resque Areas (area limits are shown on the chart).

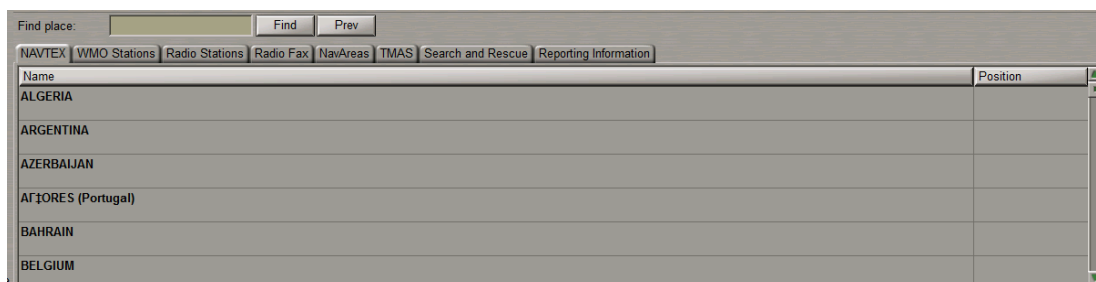
Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon, switch to the **Publications** tab. Press the **ADRS 1345** button in the **View** group.



The list of stations will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.



The table presents a number of tabs which provide data on the following station types:

- **NAVTEX** - list of NAVTEX stations;
- **WMO Stations** - list of WMO stations;
- **Radio Stations** - list of radio stations;
- **Radio Fax** - list of the radio fax stations;
- **Nav Areas** - list of Nav Areas;
- **TMAS** - list of Maritime Telemedical Assistance Service centers;
- **Search and Rescue** - list of SAR regions;
- **Reporting Information** - list of authorities that the reports should be sent to.

Each tab displays information on the relevant type of stations included in ADRS 1, 3, 4, 5. The tab provides a list of all stations of the given type grouped according to the geographic areas (countries).

Double click on the country name:

Name	Position
BAHRAIN	
BARBADOS	
BELGIUM	
ANTWERPEN	51° 12 520 N 004° 18 800 E
OOSTENDE	51° 20 191 N 003° 12 278 E
OOSTENDE MRCC	51° 14 031 N 002° 55 748 E

The list with all the stations related to the country will be expanded. For all the stations of all the countries to simultaneously expand or collapse, press the right trackball button:

Name	Position
BAHRAIN	
BARBADOS	
BELGIUM	
ANTWERPEN	51° 12 520 N 004° 18 800 E
OOSTENDE	51° 20 191 N 003° 12 278 E
OOSTENDE MRCC	51° 14 031 N 002° 55 748 E

From the drop-down list, select the **Expand All Groups** menu item. If it is necessary to collapse all the stations of all the countries, select the **Collapse All Groups** menu item.

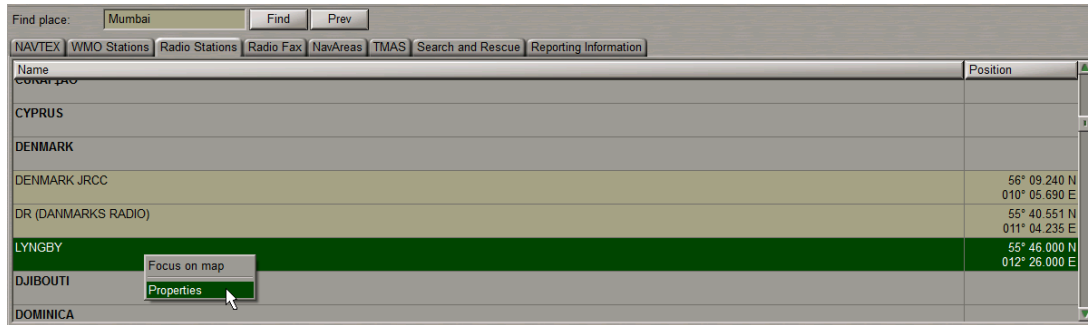
If you require prompt search for the station in the list, type the station name or its first characters in the input box, and press the **Find** button.

**NOTE:** Search is made in the currently opened tab only.

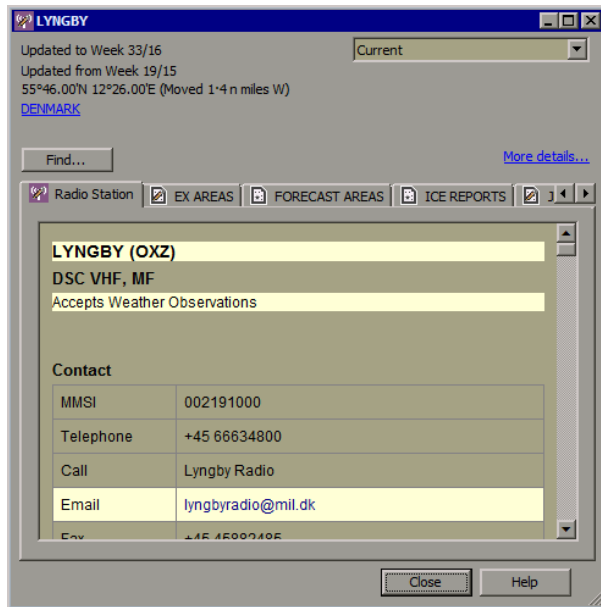
Name	Position
INDIA (Andaman and Nicobar Region)	
INDIA (Eastern Region (Including Bay of Bengal))	
INDIA (North Western Region)	
INDIA (Western Region)	
GOA MRSC	15° 24 736 N 073° 47 680 E
KOCHI MRSC (Cochin)	09° 58 000 N 076° 16 000 E
MUMBAI MRCC	18° 55 000 N 072° 49 800 E

If there are several items on the list that match the search criteria, the successive pressing on the **Find** button will switch to the next station. In this manner, you can browse through all of the stations matching your search criteria. If you wish to move backwards through the results simply use the **Prev** button to do so.

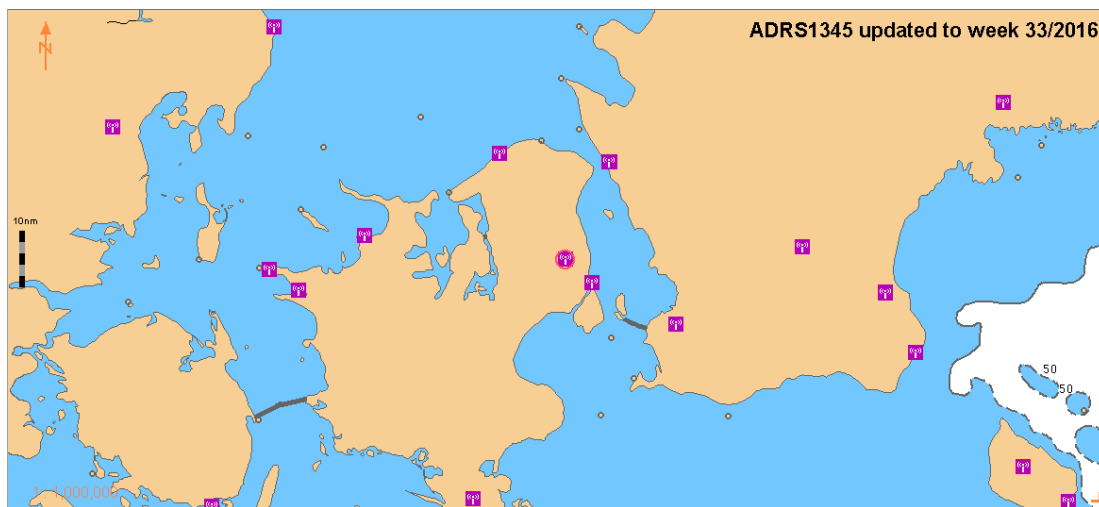
To obtain information on the necessary station, select it from the table with the cursor and press the right trackball button.



Select the **Properties** menu item.

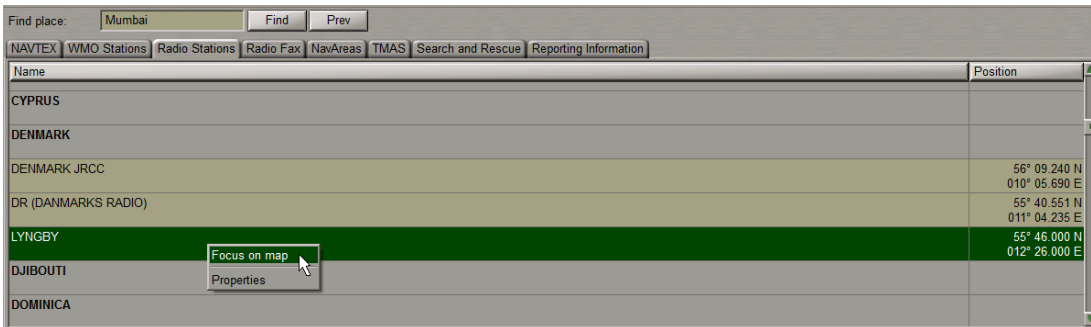


A double left click on the selected station displays the symbol of this station in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.





Similar results can be achieved if the cursor is used for selecting the station from the table, and the right trackball button is pressed.



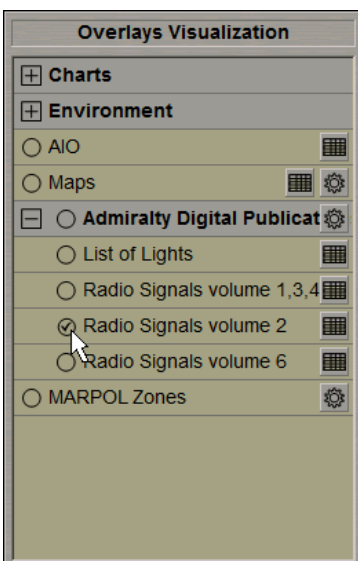
Select the **Focus on map** menu item.

## Obtaining Information on Admiralty Digital Radio Signals Volume 2

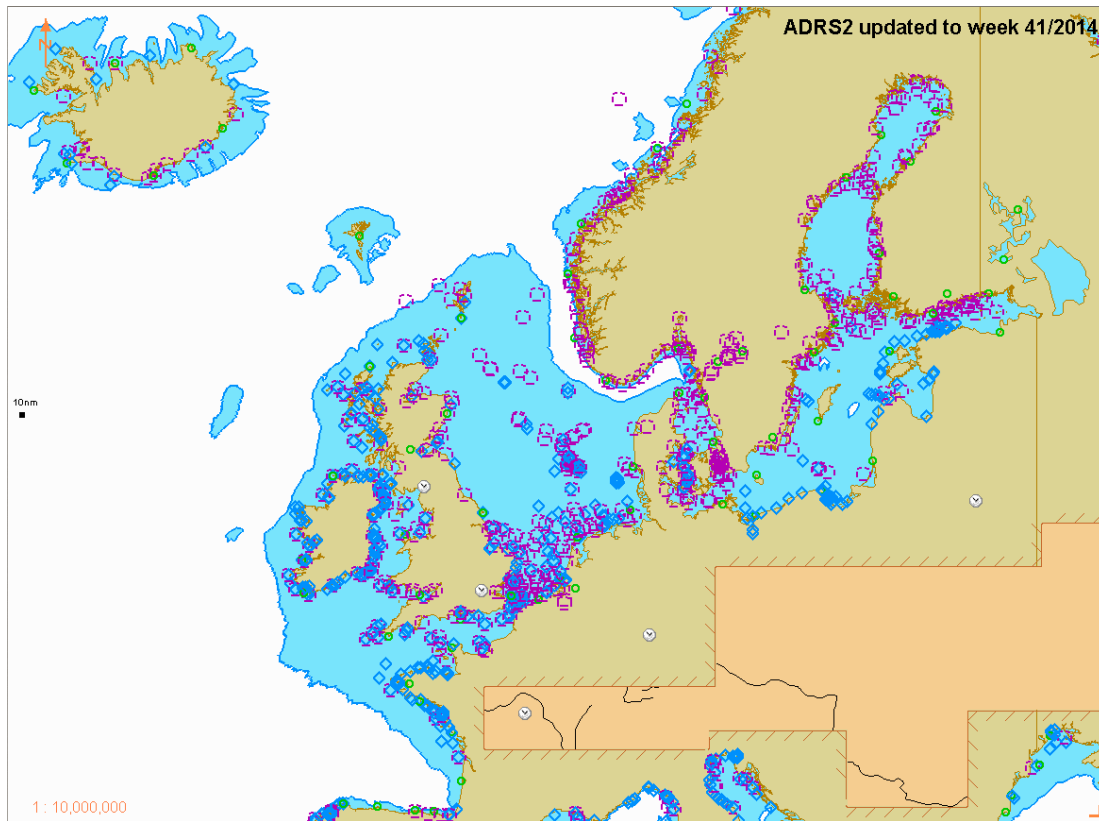
For the radio station symbols to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.



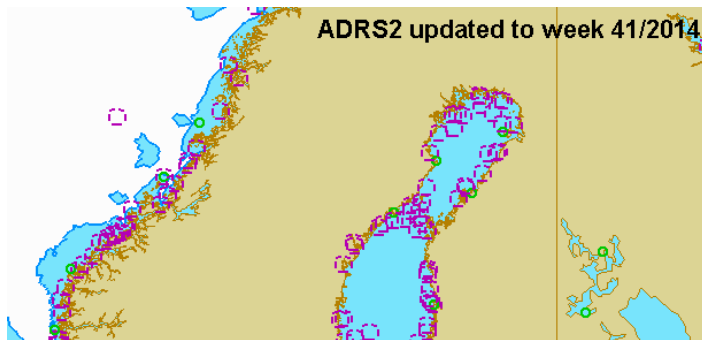
In the **Overlays Visualization** window click on the **Admiralty Digital Publications** group to open it and check the **Radio Signals vilume 2** checkbox.



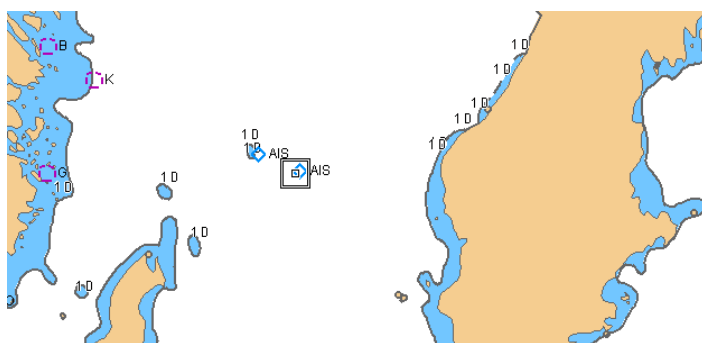
The Chart panel will display the ADRS2 symbols (if these were turned on in the **Settings** window, see paragraph *Admiralty Digital Publication Setup*):



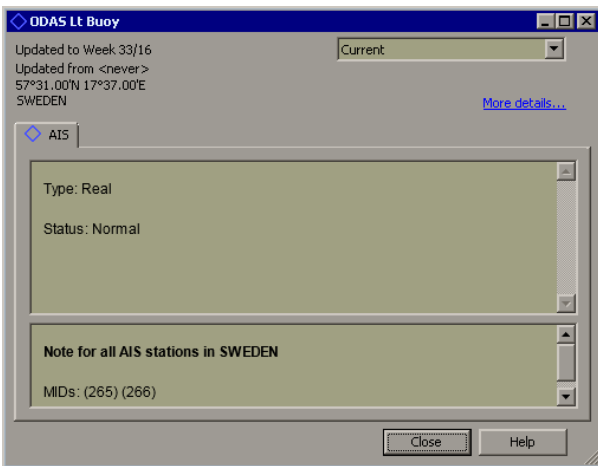
The top right corner of the Chart Panel shows the displayed ADRS2 data status, i.e., the week which it has been updated for.








To obtain information on the necessary radio station, position the free cursor on its symbol; the cursor will change its form.



Press the left trackball button: the Information data card will be displayed next to the radio station symbol:



The table below shows symbols for each station type:

	AIS
	RACONS
	DGPS
	Radio Direction Finding
	Time Signal Stations

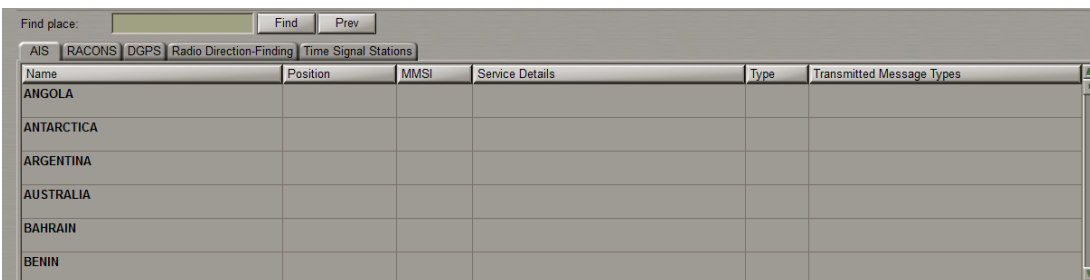
Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon, switch to the **Publications** tab. Press the **ADRS 2** button in the **View** group.



The list of stations will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

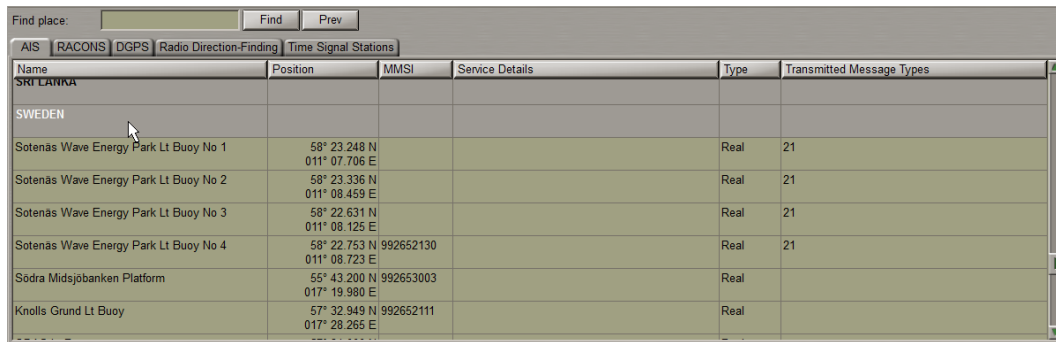


The table represents a number of tabs which provide data on the following station types:

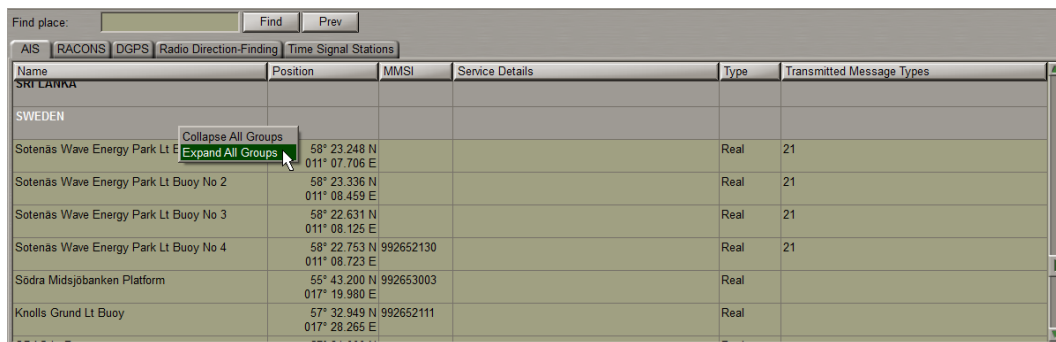
- **AIS** - the list of the Identification System Aids to Navigation (AtoN);
- **RACONS** - the list of radar beacons;
- **DGPS** - the list of radio beacons transmitting DGPS corrections;
- **Radio Direction Finding** - the list of VHF radio-direction-finding stations;
- **Time Signal Stations** - the list of radio time signal broadcast stations.

Each tab displays information on the relevant type of stations included in the ADRS2. The tab displays a list of all stations of the given type grouped according to the geographic areas (countries).

Double click on the country name:



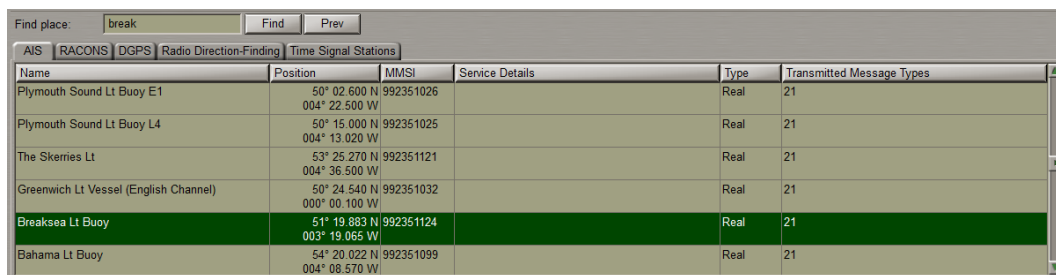
The list with all the stations related to the country will be expanded. For all the stations of all the countries to simultaneously expand or collapse, press the right trackball button:



From the drop-down list, select the **Expand All Groups** menu item. If it is necessary to collapse all the stations of all the countries, select the **Collapse All Groups** menu item.

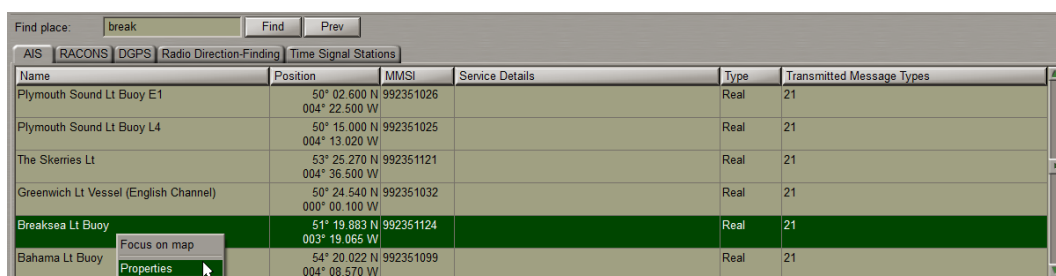
If you require prompt search for the station in the list, type the station name or its first characters in the input box, and press the **Find** button.

**NOTE:** Search is made on the currently opened tab only.

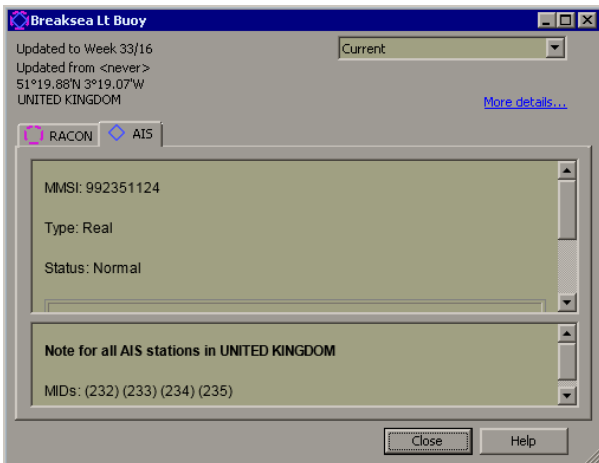


If there are several items on the list that match the search criteria, the successive pressing on the **Find** button will switch to the next station. In this manner, you can step through all of the stations matching your search criteria. If you wish to move backwards through the results simply use the **Prev** button to do so.

To obtain information on the necessary station, select it from the table with the cursor and press the right trackball button.

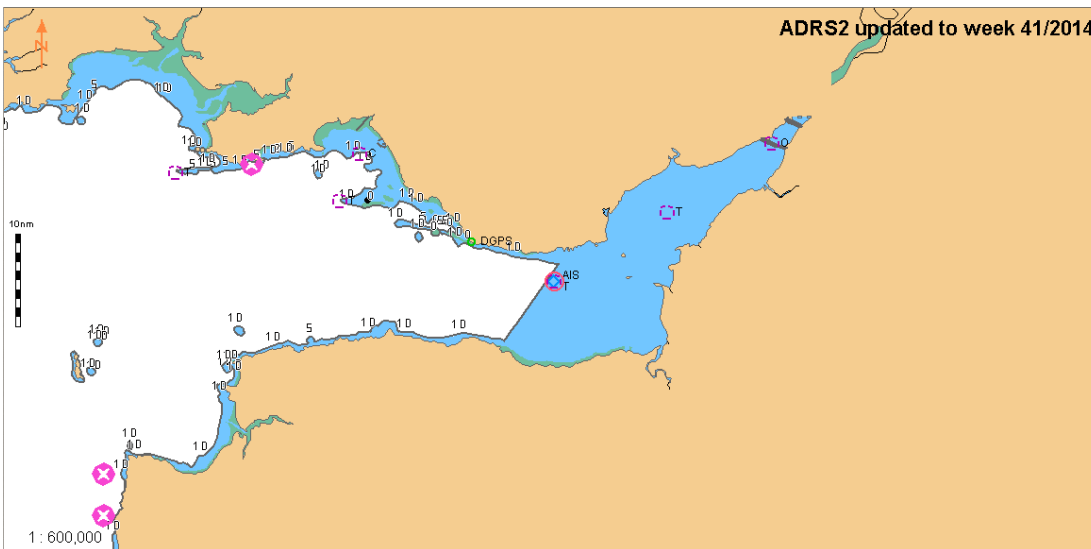


Select the **Properties** menu item.

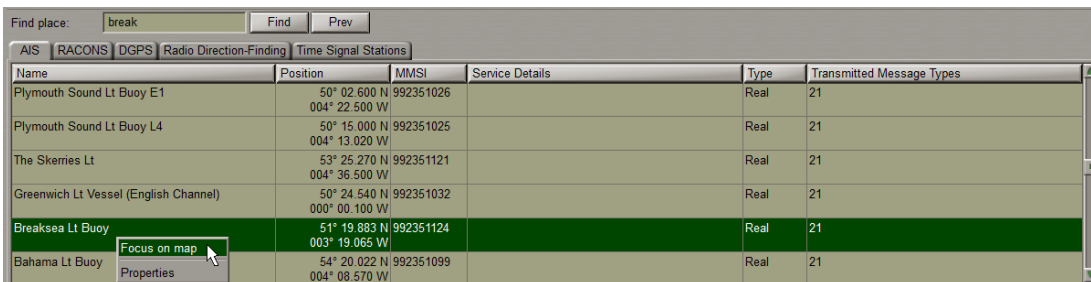


If there are several stations of different types in a single location (like in this example), the information window will have several tabs corresponding to the station types.

A double click of the left trackball button on the selected station displays the symbol of this station in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.



Similar results can be achieved if the cursor is used for selecting the station from the table, and the right trackball button is pressed.



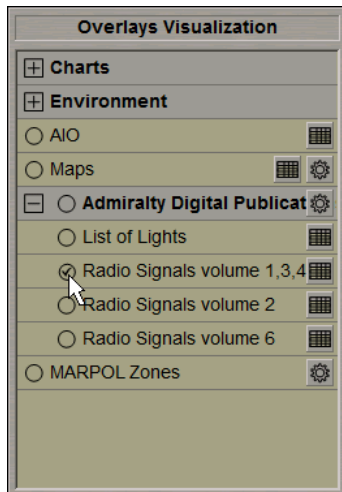
Select the **Focus on map** menu item.

# Obtaining Information on Admiralty Digital Radio Signals Volume 6

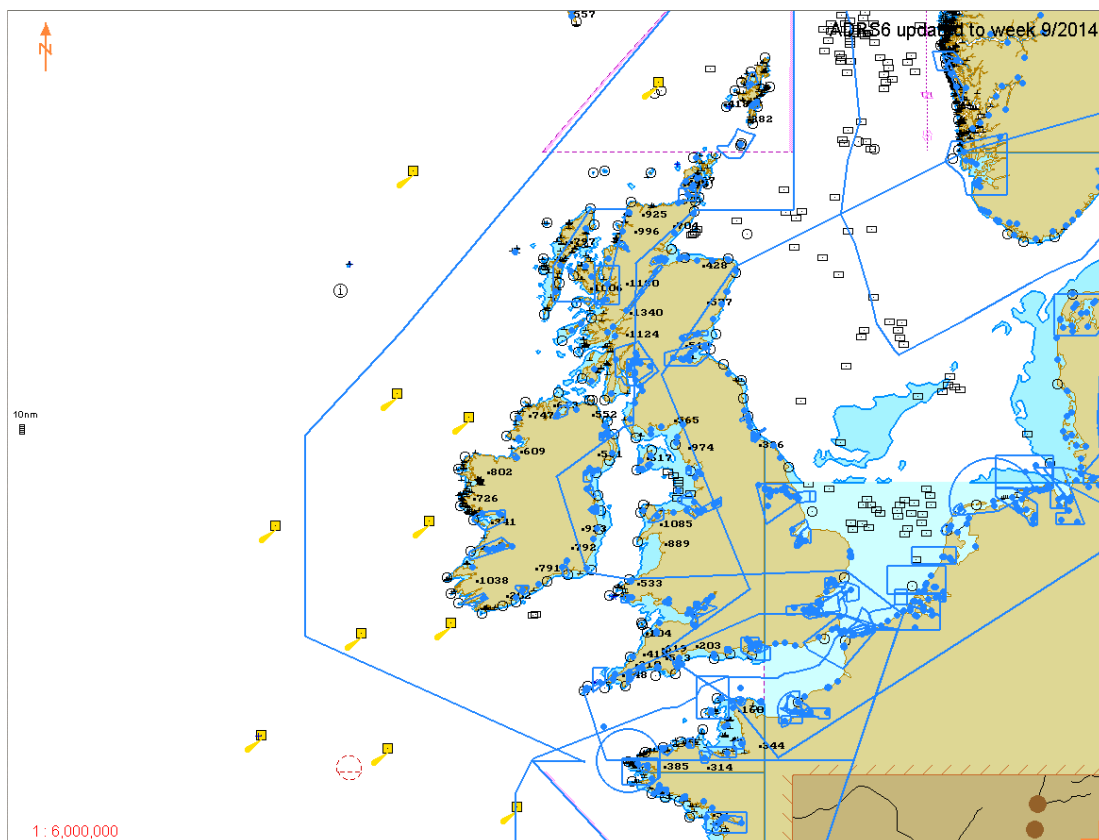
For the radio station symbols and area to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.



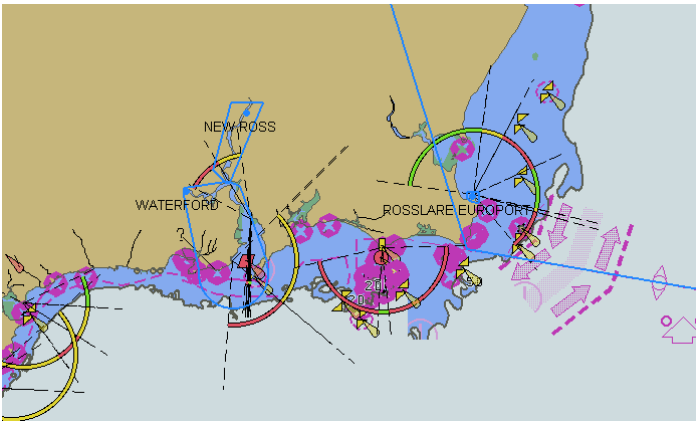
In the **Overlays Visualization** window click on the **Admiralty Digital Publications** group to open it and check the **Radio Signals vilume 6** checkbox.



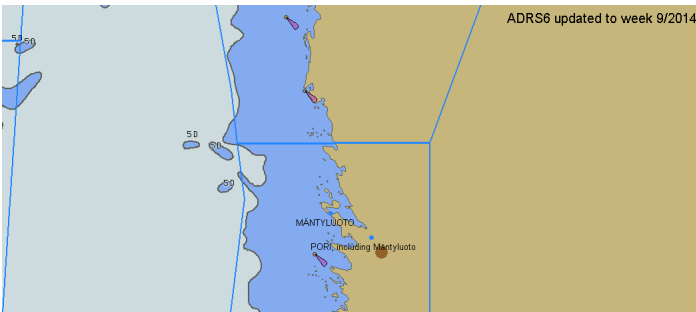
The Chart panel will display the ADRS6 symbols and areas (if these were turned on in the **Settings** window, see paragraph *Admiralty Digital Publication Setup*):



With the growth of scale (up to 1:1000000), the chart panel displays names of radio stations:



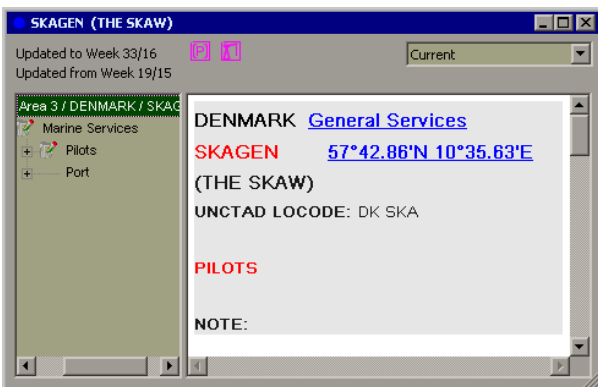
The top right corner of the Chart Panel shows the displayed ADRS data status, i.e., the week which it has been updated for.



To obtain information on the necessary radio station, position the free cursor on its symbol; the cursor will change its form.



Press the left trackball button: the Information data card will be displayed next to the radio station symbol:



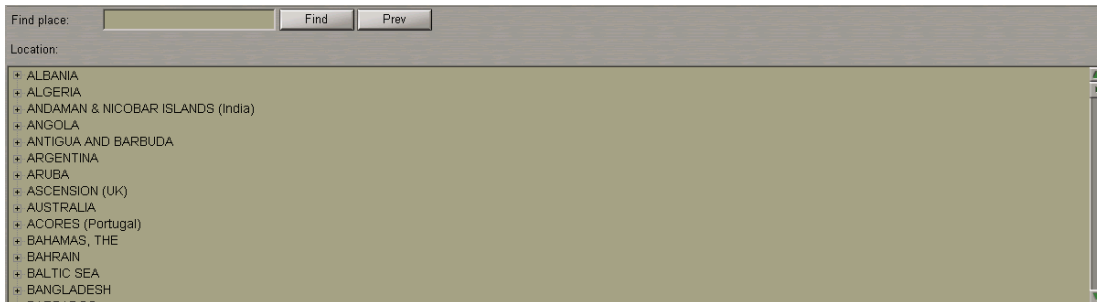
Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon, switch to the **Publications** tab. Press the **ADRS 6** button in the **View** group.

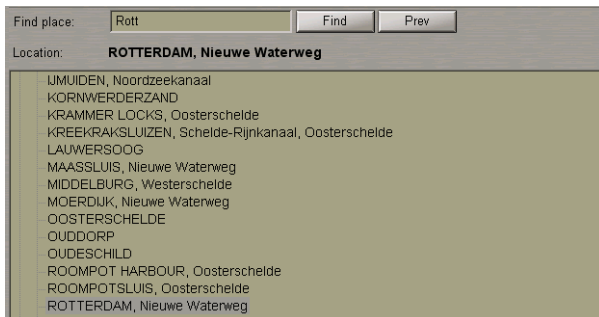


The list of stations will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.



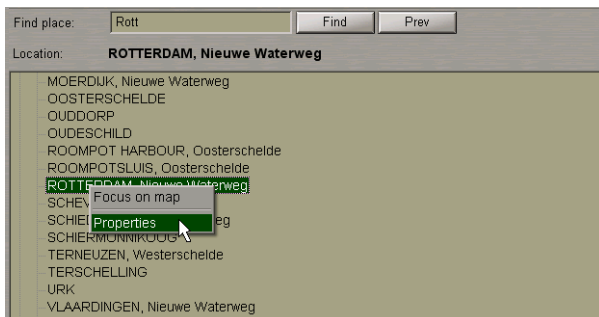
The table displays information on the stations included in the ADRS.

If you require prompt search for the station in the list, type the station name or its first characters in the input box, and press the **Find** button.



If there are several items on the list that match the search criteria, the successive pressing on the **Find** button will switch to the next station. In this manner you can step through all of the stations matching your search criteria. If you wish to move backwards through the results simply use the **Prev** button to do so.

To obtain information on the necessary station, select it from the table with the cursor and press the right trackball button.

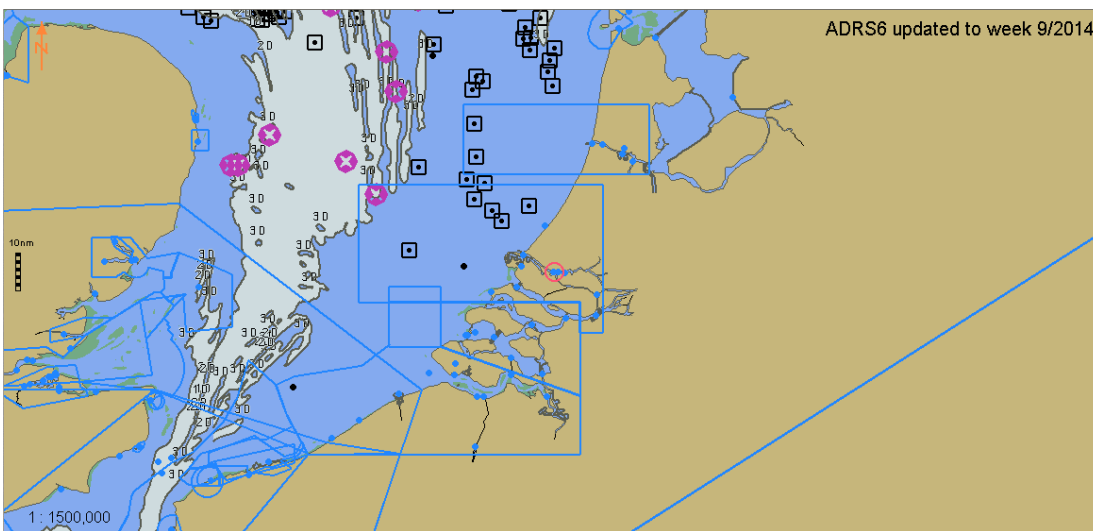


Select the **Properties** menu item.

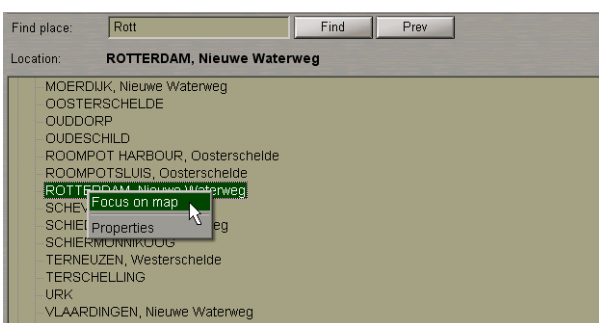




A double click of the left trackball button on the selected station displays the symbol of this station in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.



Similar results can be achieved if the cursor is used for selecting the station from the table, and the right trackball button is pressed.



Select the **Focus on map** menu item.

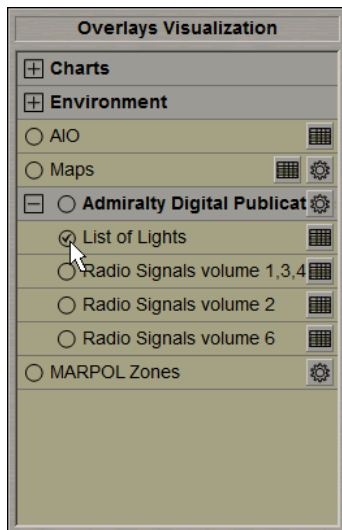
# Obtaining Information on Admiralty Digital List of Lights

**WARNING!** The List of Lights data becomes available in a while after the Navi-Planner 4000 start.

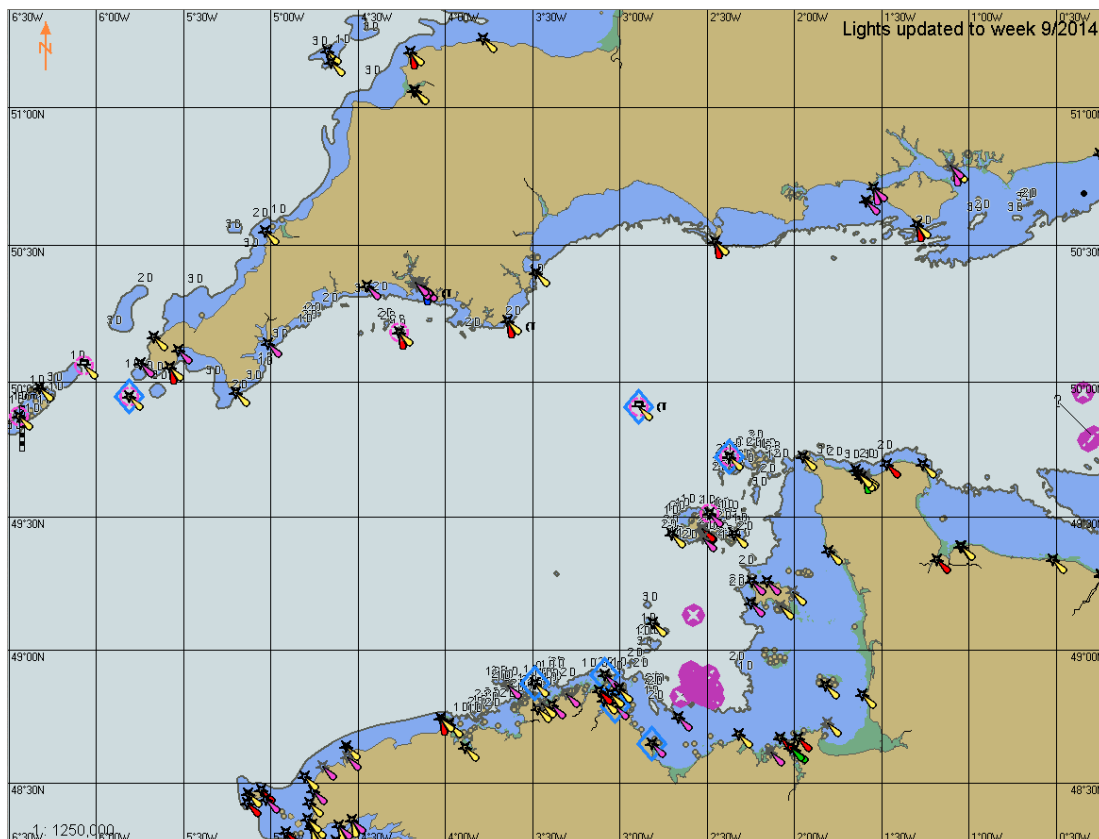
For the radio station symbols to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.



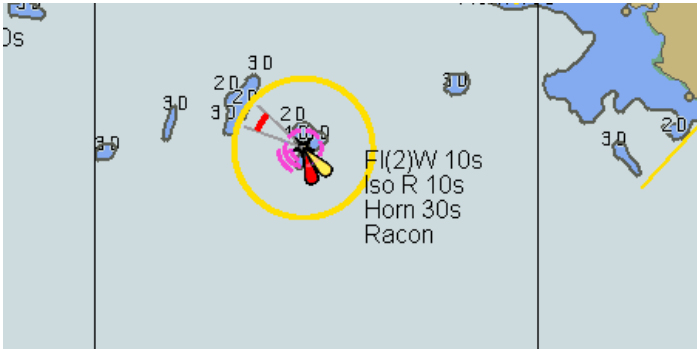
In the **Overlays Visualization** window click on the **Admiralty Digital Publications** group to open it and check the **List of Lights** checkbox.





The Chart panel will display the ADLL symbols:






If the display of lights text characteristics is enabled in the **Settings** window (see paragraph *Admiralty Digital Publication Setup*), they will look as follows:









The icons representing a light on the chart view are look different depending upon the light characteristics. Lights belong to one of two types:

	The light is fixed (on the shore, rocks or a platform of some kind);
	The light is floating (on a buoy or light-ship).




The importance of a fixed light is indicated by the detail of the star symbol:

	A major light range of 15M or more;
	A significant light range of 10M or more;
	A minor light range of less than 10M.

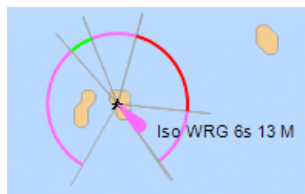
The icon will contain a light flare for each sequence the light contains. The flares are coloured as follows:





	A sequence containing only red lights (or red + white lights) is shown using this flare;
	A sequence containing only green lights (or green + white lights) is shown using this flare;
	A sequence containing only yellow lights (or yellow + white lights) is shown using this flare;
	A sequence containing only blue lights (or blue + white lights) is shown using this flare;
	A sequence containing only white lights is shown using this flare;
	Lights with multiple colours in the same sequence are shown using this flare.

A light may also have any of the following properties:

	If a light has an associated fog signal then the icon has an additional part as shown here;
	Automatic Identification System (AIS) beacon;
	Radar transponder beacon (Racon).

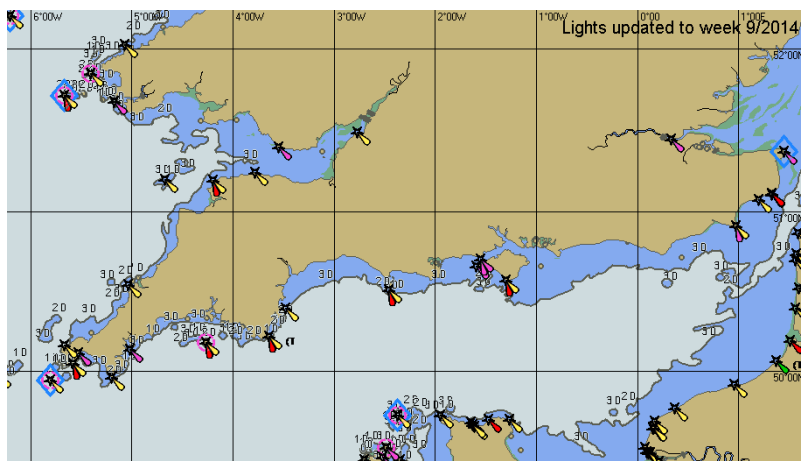
Sectored lights are represented on the chart by a coloured arc for each sector (the colours of an arc are determined using the same rules as for the light flares above).



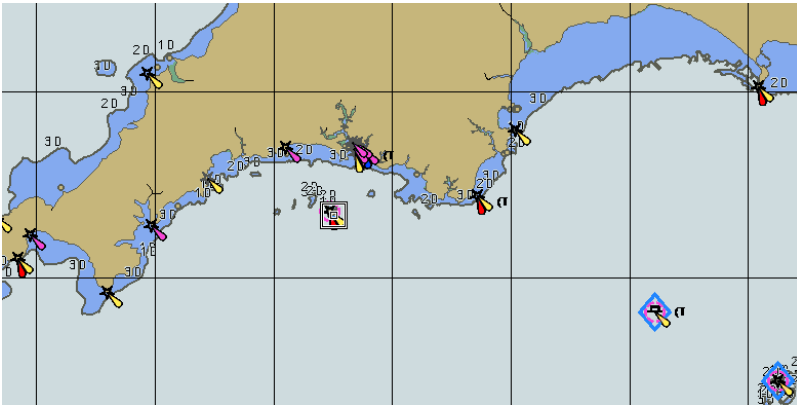
	An Obscured sector (black) and a partially obscured sector (grey);
	An Intense sector is shown with an increased radius;
	An Unintense sector is shown with a thin line;
	A Leading line is indicated with an extended ray in the direction of the line.

Only certain lights are displayed on the chart view on certain scales, this is dependent on the range of the light. The minimum visible range of lights shown for the current scale is shown on the status bar.

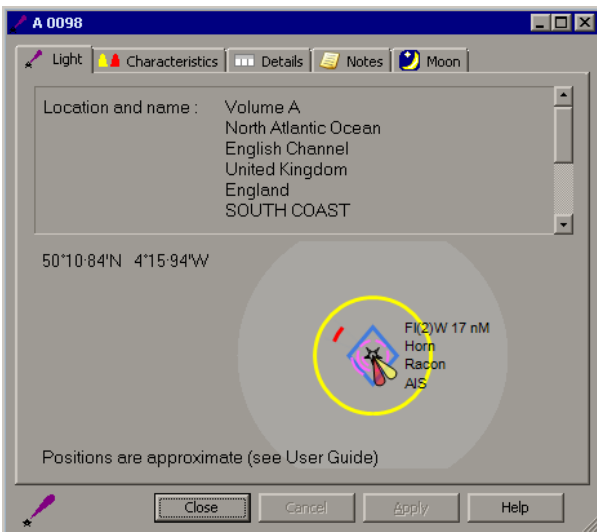
The top right corner of the Chart Panel shows the displayed ADLL data status, i.e., the week which it was updated for.



To obtain information on the necessary light, position the free cursor on its symbol; the cursor will change its form.



Press the left trackball button: the Information data card will be displayed next to the radio station symbol:



Press the button in the Task Selection Area to switch to the **Charts & Data** task.



In the Ribbon, switch to the **Publications** tab. Press the **ADLL** button in the **View** group.



The list of lights will be displayed in the table in the bottom part of the Navi-Planner 4000 screen.

Find place:  Find Prev

Location: **Volume D, North Atlantic Ocean, PortugalWEST COAST, ENSEADA DE SESIMBRA**

Area	Number	Name	Position	Characteristics	Elevation	Range	Description
1 & 2	D2143.2	- E1N	38° 26.057 N 009° 06.955 W	Oc Y 8s	21 m	3 nM	
1 & 2	B3859.1	--- W. A	60° 38.579 N 005° 34.661 E	Q R	9 m	9 nM	
1 & 2	B3840.5	-- Hageineset	60° 32.456 N 005° 16.710 E	F Y	9 m	9 nM	
1 & 2	B3840.4	-- Littebogen	60° 32.624 N 005° 16.238 E	F Y	9 m	9 nM	
1 & 2	B3840.3	-- Klubbestua	60° 32.635 N 005° 16.483 E	F Y	7 m	9 nM	
1 & 2	B3840.1	-- Bridge. Centre	60° 32.596 N 005° 16.381 E	F R	19 m	9 nM	
1 & 2	C0890.73	-- Roholm	55° 28.932 N	Oc WRG 5s	12 m	6 nM	

The table displays information on the lights included in the ALL and contains the following columns:

- **Area** - the area the light belongs to;
- **Number** - light International Number;
- **Name** -light name;
- **Position** - approximate latitude and longitude of the light position;
- **Characteristics** -information describing the light characteristics and intensity;
- **Elevation** - approximate light elevation in metres;
- **Range** - approximate range in nautical miles.

Lights in the table can be sorted by each of parameters. To do this, press on the heading of the column containing the necessary light parameter.

If you require prompt search for the light in the list, type the light name or its first characters of in the input box, and press the **Find** button.

Find place:

Location: **Volume J, North Atlantic Ocean, United States, Massachusetts NANTUCKET SOUND, MARTHA'S VINEYARD ISLAND**

Area ▲	Number	Name	Position	Characteristics	Elevation	Range	Description
9	H0801	--- W End	46° 05.553 N 060° 45.012 W	Fl R 6s	13 m	4 nM	
9	H0800	- Baddeck Harbour. Kidston Island. NE Point	46° 05.888 N 060° 44.522 W	LFl G 12s	13 m	6 nM	
9	H0798	- Mackenzie Point	46° 06.992 N 060° 38.928 W	Fl R 4s	21 m	2 nM	
9	H3476	- Three Top Island. SE Point	45° 12.482 N 061° 09.532 W	LFl W 12s	17 m	7 nM	
9	H3473	Walsh Point	45° 16.287 N 061° 01.450 W	Horn 20s	8 m	9 nM	
9	H3472	- Little Dover Harbour	45° 16.691 N 061° 01.207 W	Fl W 4s	8 m	7 nM	
9	H3471	- Rock Island	45° 16.968 N	LFl R 6s	4 m	5 nM	

If there are several items on the list that match the search criteria, then successive pressing on the **Find** button will switch to the next light. In this manner you can step through all of the lights matching your search criteria. If you wish to move backwards through the results simply use the **Prev** button to do so.

To obtain information on the necessary light, use the cursor to select it from the table and press the right trackball button.

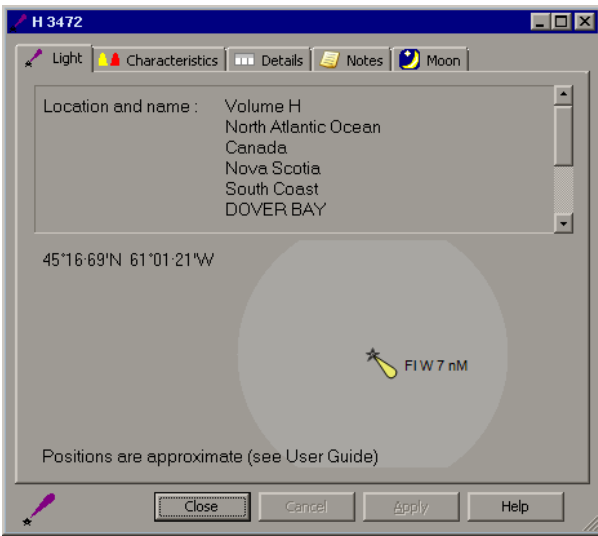
Find place:

Location: **Volume H, North Atlantic Ocean, Canada, Nova Scotia, South Coast DOVER BAY**

Area ▲	Number	Name	Position	Characteristics	Elevation	Range	Description
9	H0798	- Mackenzie Point	060° 44.522 W 46° 06.992 N 060° 38.928 W	Fl R 4s	21 m	2 nM	
9	H3476	- Three Top Island. SE Point	45° 12.482 N 061° 09.532 W	LFl W 12s	17 m	7 nM	
9	H3473	Walsh Point	45° 16.287 N 061° 01.450 W	Horn 20s	8 m	9 nM	
9	H3472	- Little Dover Harbour	45° 16.691 N 061° 01.207 W	Fl W 4s	8 m	7 nM	
9	H3471	- Rock	45° 16.968 N 061° 01.710 W	LFl R 6s	4 m	5 nM	
9	H3468	- Harbour Shoal	45° 20.341 N 060° 59.643 W	Fl G 4s	6 m	6 nM	

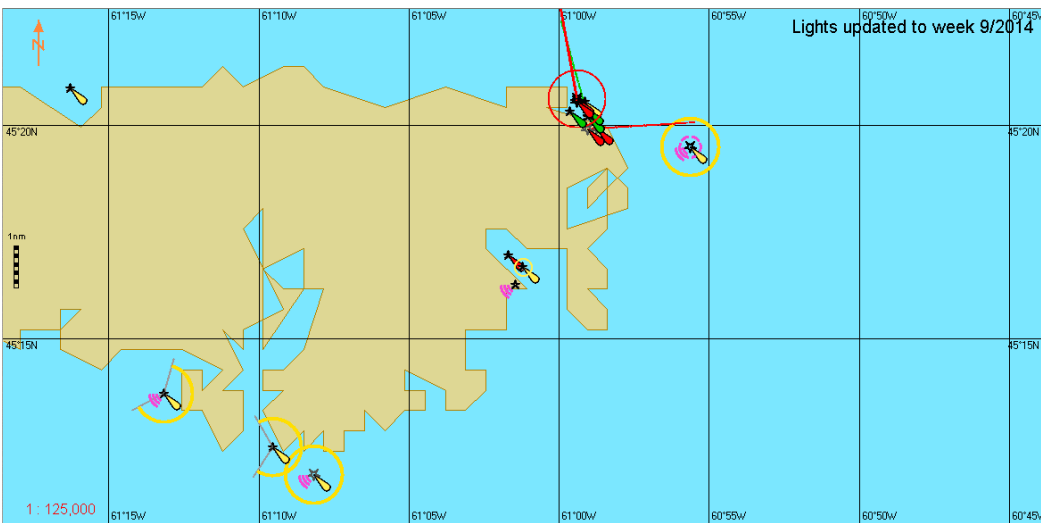
Context menu for H3471:

Select the **Properties** menu item.

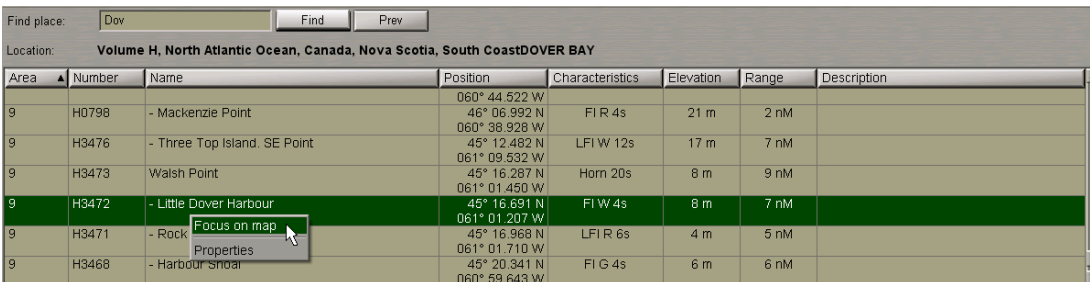


**ATTENTION!** Lights objects cannot be displayed on scales smaller than 1:300,000.

A left double click on the selected station displays the symbol of this light in the centre of the Chart Panel highlighted with a flashing circle for 10 seconds.



You can achieve similar results if you select the light from the table with the cursor and press the right trackball button.



Select the **Focus on map** menu item.

# MARPOL Data

This chapter describes the procedure used for handling MARPOL data in the Navi-Planner 4000.

---

General .....	225
MARPOL Data Display Setup .....	227
Obtaining Information on MARPOL Data .....	227
Checking the Route Taking into Account MARPOL Data .....	230
Obtaining Information on MARPOL Data during Voyage Plan Creation .....	231



## General

**WARNING!** The MARPOL data cannot be displayed or used unless Advanced Intelligent Routing option is additionally licensed.

**WARNING!** The MARPOL charts are installed by the service engineer at the installation stage and is updated automatically in the course of operation.

The Navi-Planner 4000 enables the user to display areas covered the rules of the International Convention for the Prevention of Pollution from Ships (MARPOL).

The prevention convention for that was adopted back in 1973/78, entered into force on October 1983. The convention is consisting of different Annexes focused on different types of pollution, rules and recommendations.

The MARPOL Overlay was developed using the following Annexes that Marine Environment Protection Committee created and adopted at different times. The MARPOL overlay in Navi-Planner satisfies to the following annexes and amendments to them:

ANNEX	TITLE	ENTRY INTO FORCE	AMENDMENTS
I	Prevention of pollution by OIL & oily water	2 October 1983	MEPC .117(52), Adopted on 15 OCTOBER 2004 MEPC.154(55), Adopted on 13 OCTOBER 2006
II	Control of pollution by NOVIIOUS liquid substances	6 April 1987	MEPC.118(52), Adopted on 15 October 2004
IV	Pollution by SEWAGE from ships	27 September 2003	MEPC.200(62), Adopted on 15 JULY 2011
V	Pollution by GARBAGE from ships	31 December 1988	MEPC.219(63), Adopted on 2 MARCH 2012
VI	Prevention of AIR pollution from ships	19 May 2005	MEPC.202(62), Adopted on 15 JULY 2011





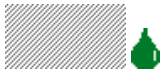













**WARNING!** Annex III, which is about HARMFUL SUBSTANCES IN PACKAGED FORM is not available in Navi-Planner since the rules of the annex are applied to the whole marine environment world (so there is no need to hatch the whole seas.).

MARPOL zones are integrated in Navi-Planner as an overlay for the whole world; the overlay becomes accessible when an appropriate license option is enabled.


The MARPOL Convention is in force globally. The Navi-Planner 4000 permits displaying areas which the most stringent Convention rules are applicable to, as well as the Particularly Sensitive Sea Area (PSSA).

This functionality allows to MARPOL data to be used in plotting routes. By operating the route checking the user can track the planned route crossing of various MARPOL areas, and edit it as required so as to avoid them.

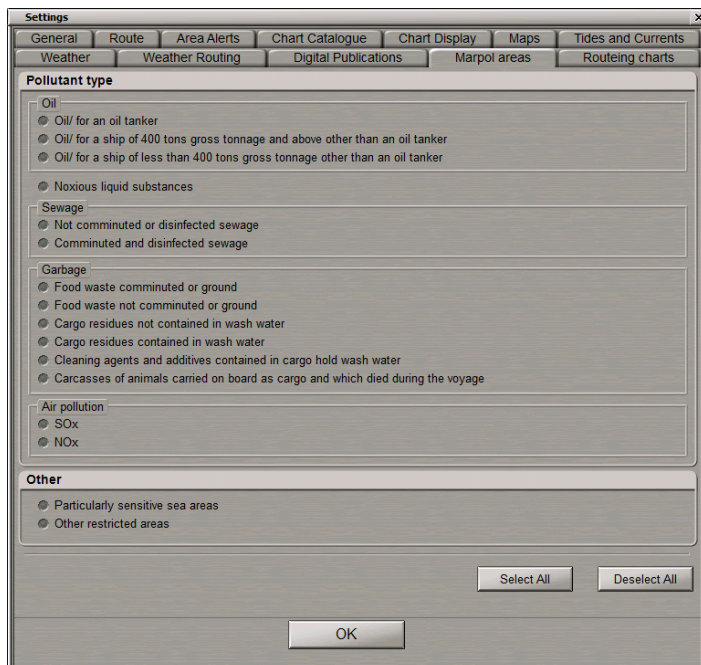
The Navi-Planner 4000 has a capability to display the following MARPOL areas and PSSA:

MARPOL AREA	MARPOL OBJECTS	DESIGNATION ON THE CHART PANEL
Oil		
	Oil/for an oil tanker	
	Oil/for a ship of 400 tons gross tonnage and above other than an oil tanker	
	Oil/for a ship of less than 400 tons gross tonnage other than an oil tanker	
Noxious liquid substances		
Sewage		
	Not comminuted and disinfected sewage	
	Comminuted and disinfected sewage	
Garbage		
	Food waste comminuted or ground	
	Food waste not comminuted or ground	
	Cargo residues not contained in wash water	
	Cargo residues contained in wash water	
	Cleaning agents and additives contained in cargo hold wash water	
	Carcasses of animals carried on board as cargo and which died during the voyage	
Air pollution		
	SOx	
	NOx	
Other		
	Particularly Sensitive Sea Area	 PSSA
	Other restricted areas	 VGP

## MARPOL Data Display Setup

Press the  button in the toolbar of the Chart Panel.

The **Settings** window will open up. Switch to the **Marpol areas** page.



In the **Pollution type** group, check the checkboxes next to the names of pollution type areas which will be shown on the Navi-Planner 4000 screen when the MARPOL Areas layer is turned on.

In the **Other** group, check the **Particularly sensitive sea areas** checkbox for displaying the PSSA on the Navi-Planner screen when the MARPOL Areas layer is turned on.

To display areas with restrictions on all kinds of disposals from the vessels as per the national law, check the **Other restricted areas** checkbox. In the current software implementation, with this checkbox checked, only the VGP (Vessel General Permit) area will be displayed. In accordance with the US Regulations, this is a 3-nm area within which the ships are required to comply with the specified rules.

To check all the checkboxes, press the **Select All** button. To uncheck all the checkboxes, press the **Deselect All** button.

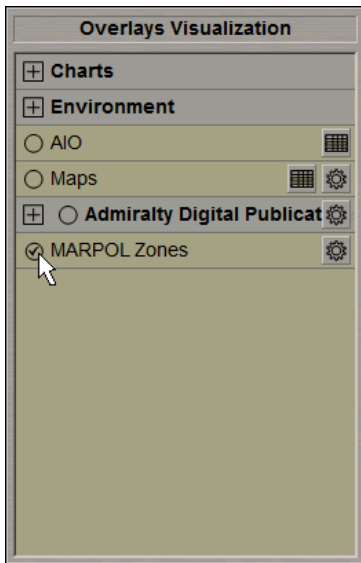
## Obtaining Information on MARPOL Data

For the MARPOL symbols and areas to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.

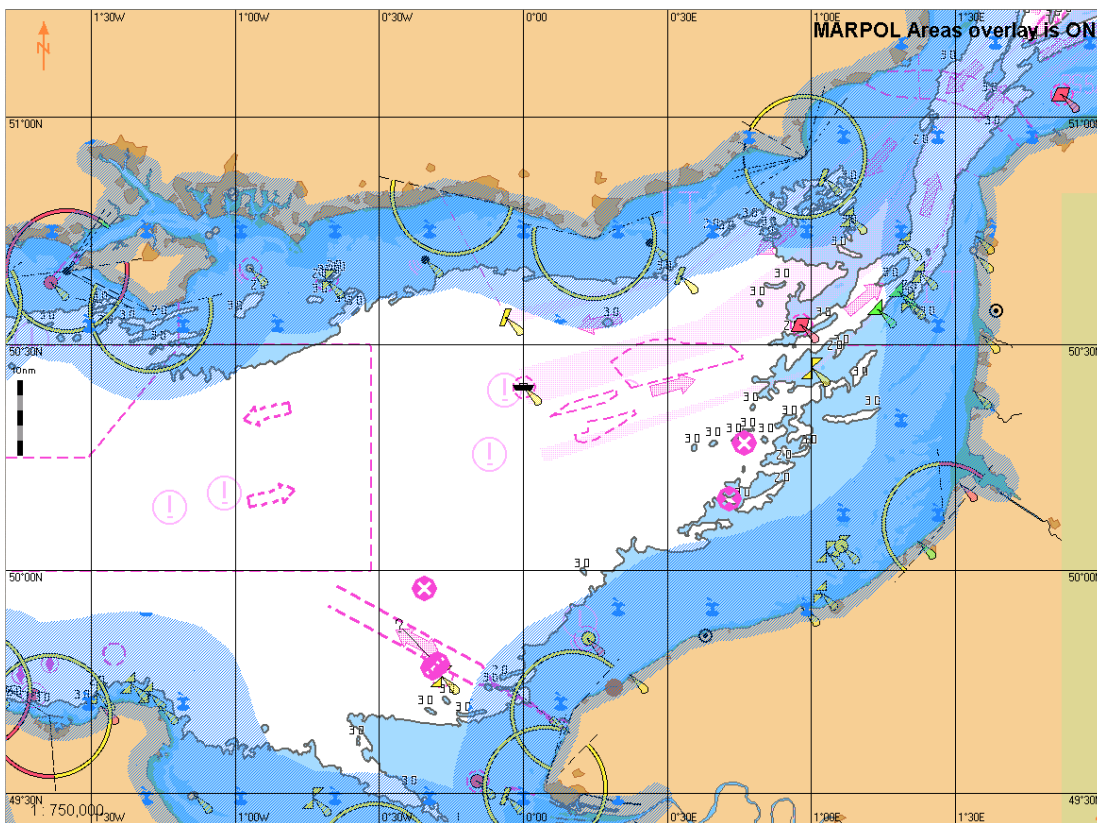
For the MARPOL symbols and areas to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.



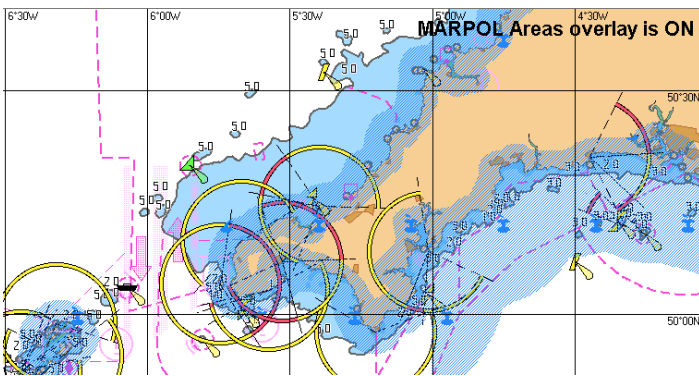
In the **Overlays Visualization** window and check the **MARPOL Zones** checkbox.



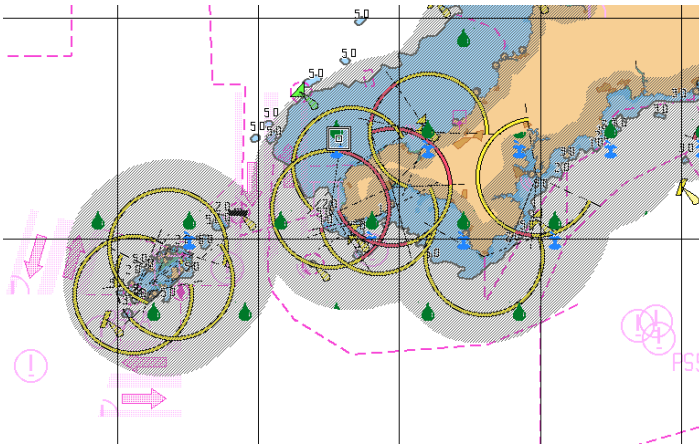
The Chart panel will display the MARPOL symbols and areas (if these were turned on in the **Settings** window, see paragraph *MARPOL Data Display Setup*):



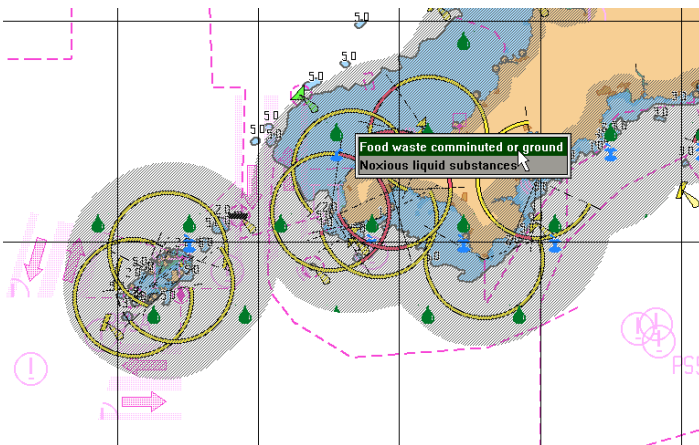
The top right corner of the Chart Panel shows the notation: "MARPOL Areas overlay is ON".



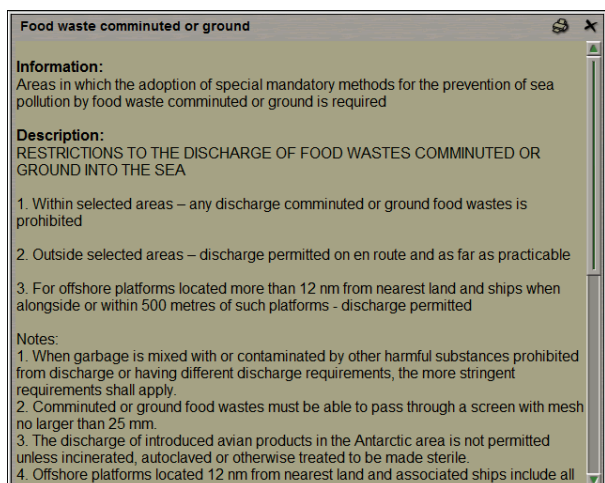
To obtain information on the necessary MARPOL area, position the free cursor on a hatched MARPOL area; the cursor will change its form.



Press the left trackball button: from the drop-down list, select the necessary type of MARPOL area under the cursor:

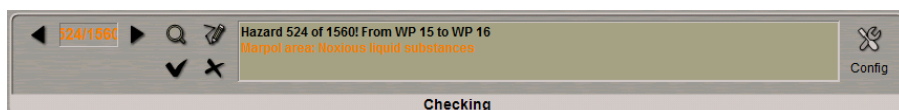


The Information data card will be displayed on the Chart Panel:



## Checking the Route Taking into Account MARPOL Data

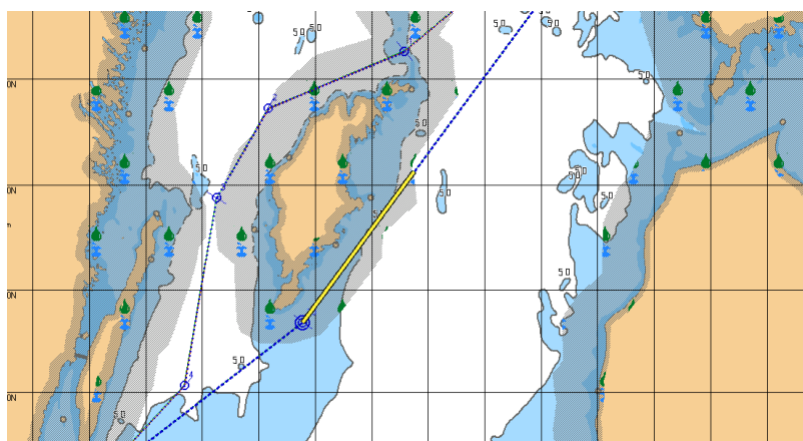
Check the route for dangers to navigation (see *Chapter 3, section Checking and Editing the Route Taking into Account Dangers to Navigation*).



In addition to the dangers to navigation, the route will be checked for crossing the MARPOL areas which were turned on in the **Settings** window (see paragraph *MARPOL Data Display Setup*).

Press the  button.

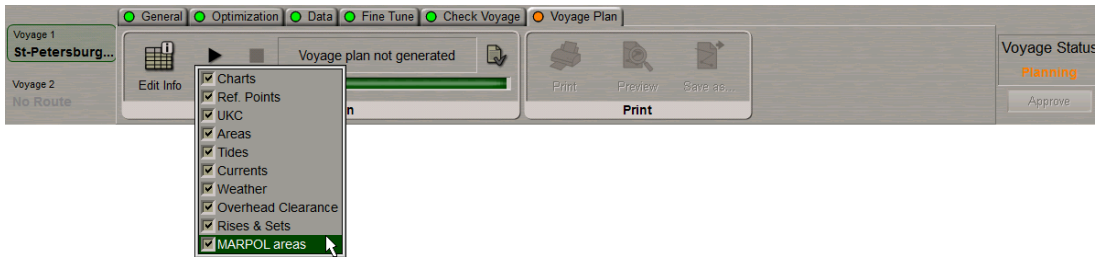
The route leg segment crossing the MARPOL areas will be displayed in the centre of the Chart Panel highlighted in yellow



Edit the route as required in order to avoid the MARPOL areas (see *Chapter 3, section Checking and Editing the Route Taking into Account Dangers to Navigation*).

# Obtaining Information on MARPOL Data during Voyage Plan Creation


Create the voyage plan (see *Chapter 3, section Voyage Plan Creation, paragraph Data Collection*).

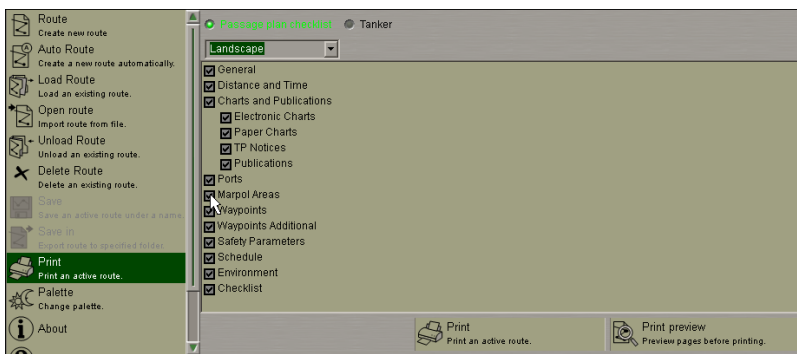


For the voyage plan creation with regard to the MARPOL data, check the **MARPOL areas** checkbox.

NOTE: During the voyage plan creation, it is only the data which was turned on in the **Settings** window which is taken into account (see paragraph *MARPOL Data Display Setup*).

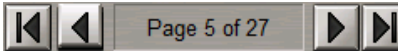
After the data collection, the voyage plan data will be available in the Voyage Plan Printout.

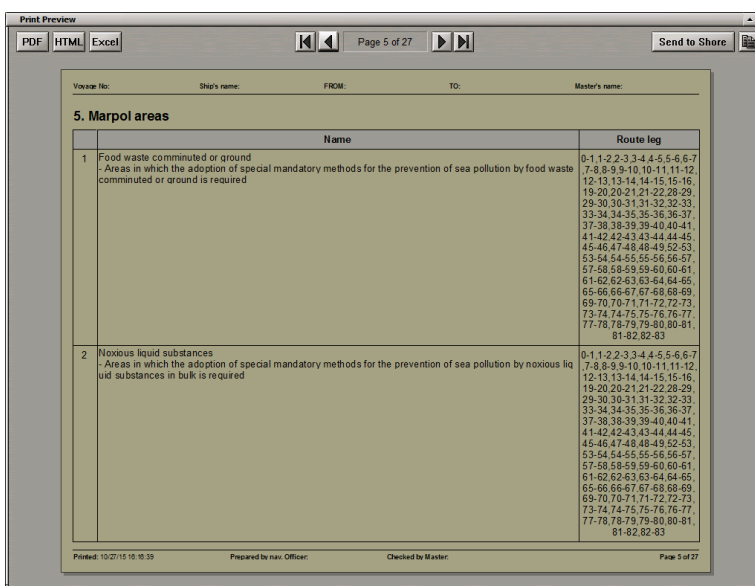
Press the Transas button  and select the **Print** item from the drop-down menu.



In the right-hand part of the menu, check the **Marpol Areas** checkbox.

In the right-hand part of the menu select the **Print Preview** item and press the left trackball button. The **Print Preview** window will display a printed version of the Voyage Plan.

By using the following buttons  find the **Marpol areas** section.



# Routeing Charts

This chapter describes the procedure used for handling Routeing Charts in the Navi-Planner 4000.

---

<b>General</b> .....	<b>233</b>
<b>Routeing Charts Display Setup</b> .....	<b>233</b>
<b>Obtaining Information on Routeing Charts</b> .....	<b>234</b>



# General

**WARNING!** The Routeing Charts cannot be displayed or used unless this option is additionally licensed.


**WARNING!** The Routeing Charts are installed by the service engineer at the installation stage and is updated automatically in the course of operation

The use of the Routeing Charts facilitates the route pre-planning when the main Traffic Separation Schemes (TSS) are shown on the small scale charts. The plotted route can subsequently be used for ordering charts (see *Chapter 5*, section *Data Ordering*, paragraph *Compiling List of Charts and Chart Folios for Order*, item *Selecting Charts by Route*) and working with the TSS on large scale charts.

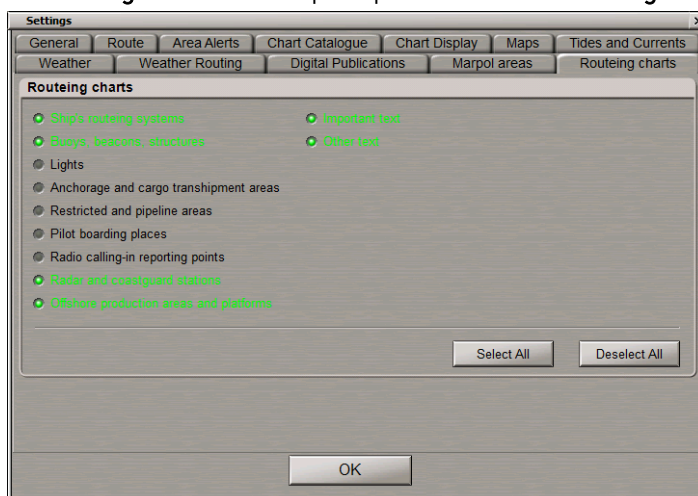
Enabling display of Routeing Charts on the Navi-Planner 4000 screen permits the following chart objects to be displayed:

- Ship routeing systems;
- Buoys, beacons, structures;
- Lights;
- Anchorage and cargo transhipment areas;
- Restricted and pipelines areas;
- Pilot boarding places;
- Radio-calling -in reporting points;
- Radar and coastguard stations;
- Offshore production areas and platforms;
- Important text;
- Other text.

## Routeing Charts Display Setup

Press the  button in the toolbar of the Chart Panel.

The **Settings** window will open up. Switch to the **Routeing charts** page.



In the **Routeing charts** group, check the checkboxes next to the names of chart objects which will be shown on the Navi-Planner 4000 screen when the routing charts layer is turned on.

To check all the checkboxes, press **Select All** button. To uncheck all the checkboxes, press **Deselect All** button.

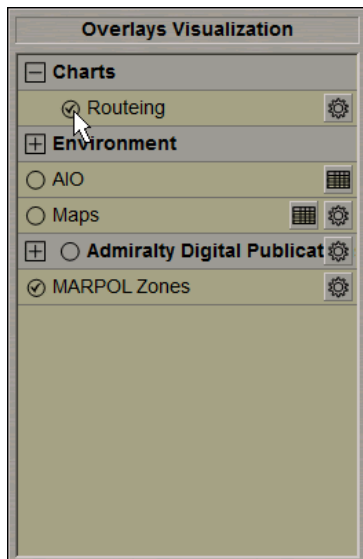
# Obtaining Information on Routeing Charts

For the Routeing Charts to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.

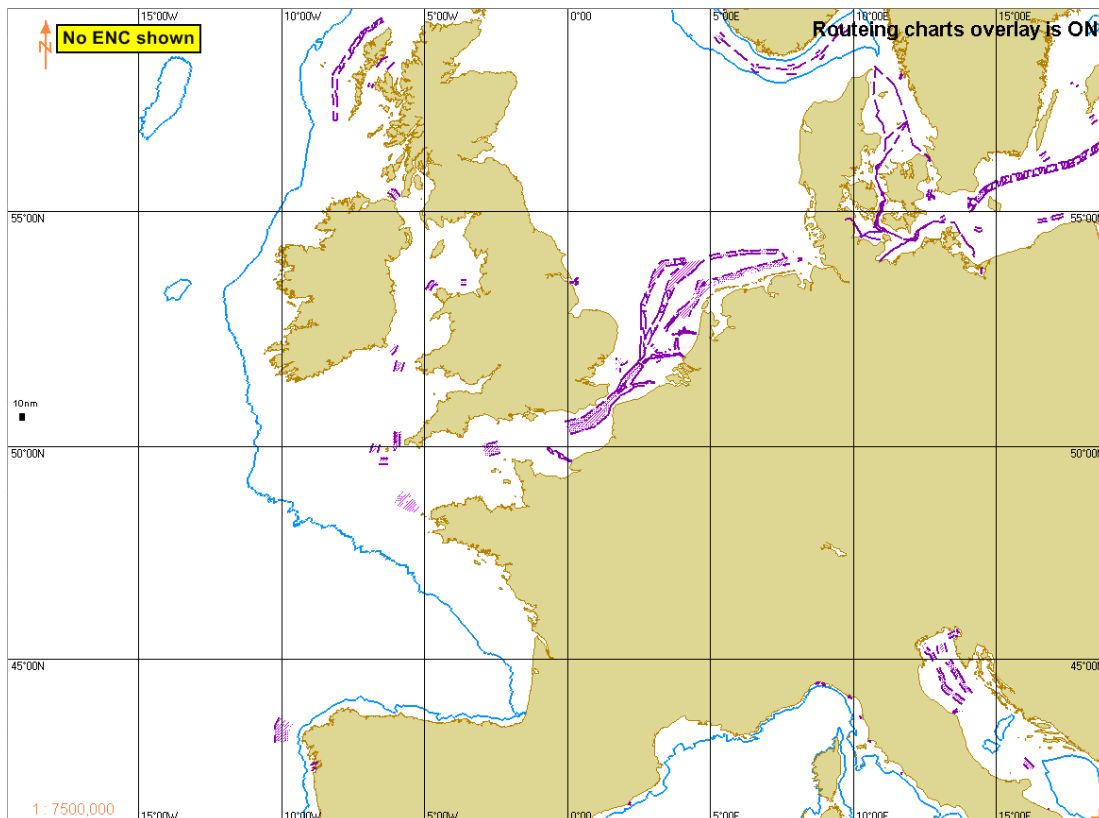
For the Routeing Charts to be displayed on the Chart Panel, press the button in the toolbar of the Chart Panel.



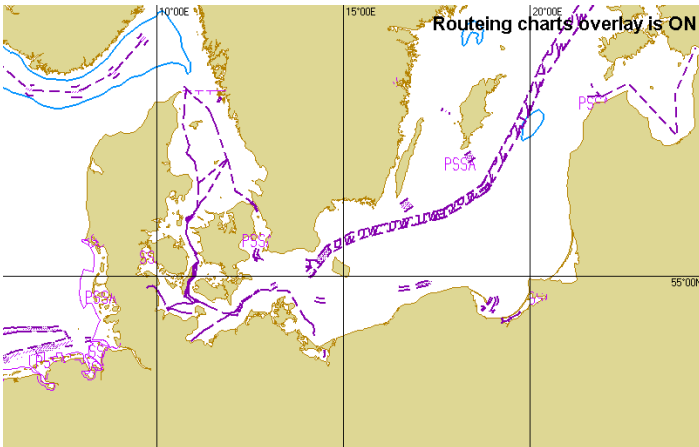
In the **Overlays Visualization** window click on the **Charts** group to open it and check the **Routeing** checkbox.



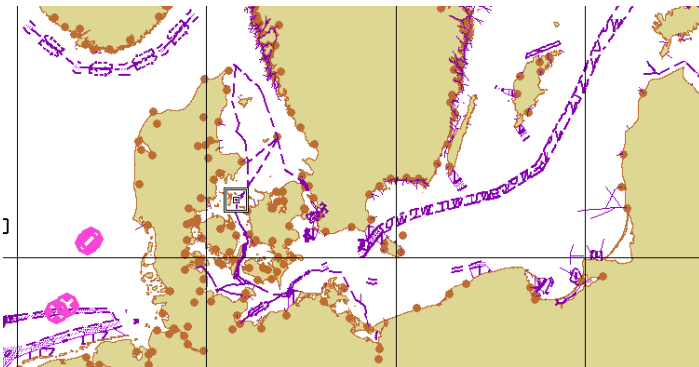
The Chart Panel will display the Routeing Charts objects (if these were turned on in the **Settings** window, see paragraph *Routeing Charts Display Setup*):



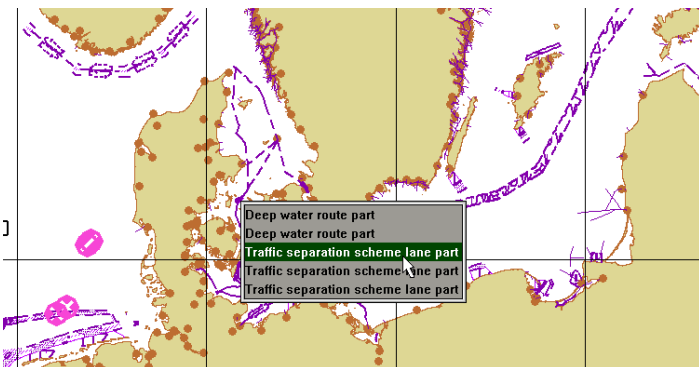
The top right corner of the Chart Panel shows the notation: "Routeing charts overlay is ON".



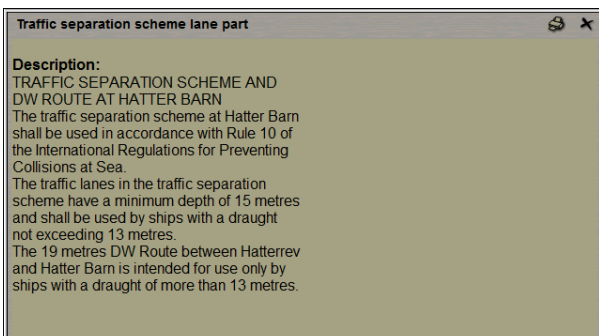
To obtain information on the necessary routeing chart object, position the free cursor on it; the cursor will change its form.




Press the left trackball button: from the drop-down list, select the necessary routing chart object which is under the cursor:

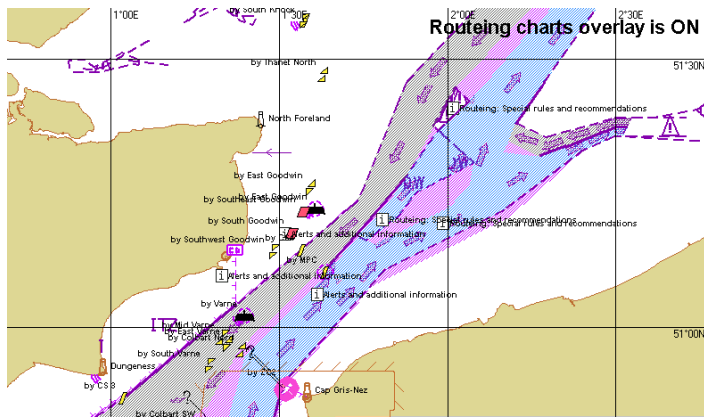


The Information data card will be displayed on the Chart Panel:

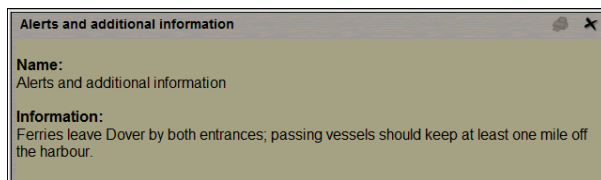


It is also necessary to pay attention to the use of an important text (the **Important text** checkbox is checked in the **Settings** window, see paragraph *Routeing Charts Display Setup*).

On the Chart Panel, such information is shown in the form of the  symbol.



As the cursor is positioned on it and information is acquired (see above), the Information data card will display additional text information on navigation in the area in question. This is essential for the intensive ship traffic areas (the English Channel, the Strait of Malacca, etc.):



# Status Information

This chapter describes procedures used for handling information on the status of all the Navi-Planner 4000 data and processes.

---

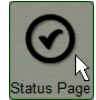
<b>General</b> .....	<b>238</b>
<b>Connection Status</b> .....	<b>239</b>
<b>Synchronization Status</b> .....	<b>239</b>
<b>Chart Status Summary</b> .....	<b>241</b>
<b>Weather Forecast</b> .....	<b>243</b>
<b>Admiralty Digital Publications</b> .....	<b>243</b>
<b>Troubleshooting Report</b> .....	<b>244</b>

# General

All the data processed and displayed by the Navi-Planner 4000 is required to be updated by the latest available updating.

The status of this data can be found in different places in the Navi-Planner 4000. The **Status Page** accumulates information on the status of all the data available in the product.

Press the button in the Task Selection Area to open the Status Page.



**Connection Status**  
 Charts and Data Server online Transas Centre online Channel type - Backup

**Status**  
 Synchronization Status: OK

Computer Name	Status
W1	OK
W2	OK

Manual synchronization Update ECDIS

**Chart Status Summary (ENC Charts)**

Charts status	Count
Total	246
Up to date	0
Not up to date	0
Withdrawn	246
Unknown	0

Update catalogue Update charts

Update your outdated charts.


**Weather Forecast**  
 Weather From 11-04-2018 To 24-04-2018. Update forecast

**Admiralty Digital Publications**

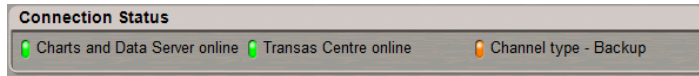
Pubs	Updated to
ADRS1345	7/2017
ADRS2	7/2017
ADRS6	7/2017
ADLL	7/2017

Update

**Troubleshooting report**  
 Support Report a problem

To close the **Status Page**, press the  button in the top right corner.

# Connection Status



The **Connection Status** group is intended for displaying the Navi-Planner 4000 connection status. The green **Charts and Data Server online** lamp indicates that the Navi-Planner 4000 is connected to the Transas Chart Server, whereas the red **Offline** lamp indicates that the Navi-Planner 4000 is not connected to the Transas Chart Server. The green **Transas Centre online** lamp indicates that the shore data management system is accessible.

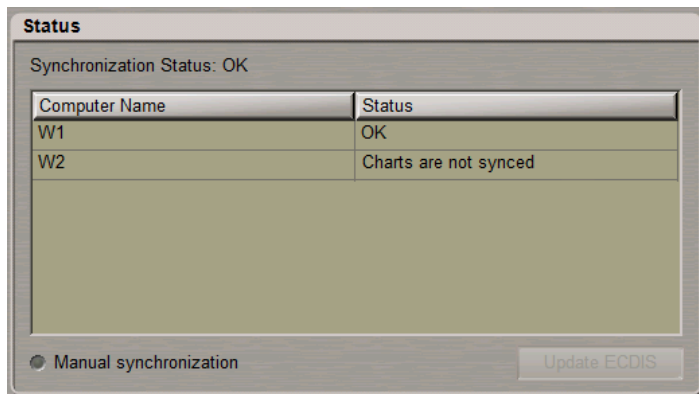
The **Channel Type** lamp indicates the type of the channel used for connecting Navi-Planner 4000 with the Transas Chart Server.

CHANNEL TYPE	LAMP ON STATUS PAGE	ICON ON NAVI-PLANNER 4000 SCREEN
Main	Green	
Backup	Orange	
No connect	Red	

This information is also duplicated by icons in the top left corner of Navi-Planner 4000 screen. The **Main** channel is intended for the basic operation, its use implies low expenditures. The use of the **Backup** channel implies higher expenses that have to be borne when the **Main** channel cannot be used, so its use should be limited.

# Synchronization Status

The **Status** group is intended for displaying status of the installed chart collection synchronization:



This group shows the WS's and the status of chart collections on these WS's. There can be the following statuses:

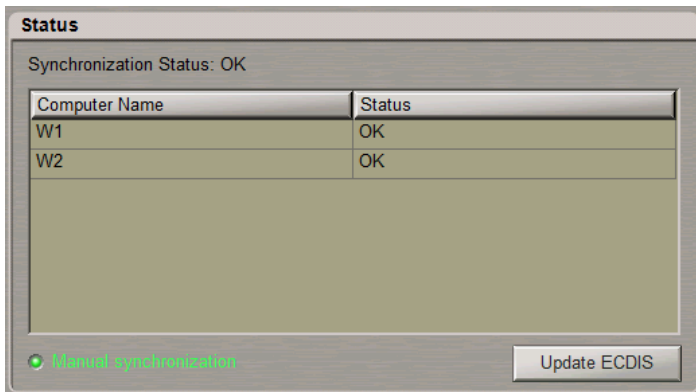
- **OK** – chart collections are synced between the Navi-Planner 4000 and all the workstations in the network;
- **XX% - Syncing** - the collection is in the process of synchronization (the synced charts percent is specified);
- **Charts are not synced** - charts are not synced between the Navi-Planner 4000 and ECDIS.

---

NOTE: If the WS is not available anymore, it is not listed in the table.

---

By default, the chart collection synchronization occurs automatically (the **Manual synchronization** checkbox is unchecked). If there is a large number of updates, it is first necessary to install them in one WS and then synchronize them with the rest of the WS's. To this end, check the **Manual synchronization** checkbox.



Install the necessary updates (see *Chapter 5, section Data Management, paragraph Installing All Data*). Press the **Update ECDIS** button. The chart collection will be synchronized on all the stations.

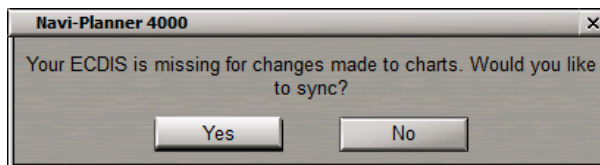
As this is done, there may be the following options:

- Navi-Planner 4000 has crashed.

In the case of the Navi-Planner 4000 crash, the un-synced changes made to the collection should survive, so that when the Navi-Planner 4000 is restarted, it will be possible to finish the synchronization.

- Navi-Planner 4000 has been exited.

In the case of the Navi-Planner 4000 exit before the synchronization is completed, the user is warned by a relevant message:



A click on the **Yes** button will start the synchronization, and the Navi-Planner 4000 remains running.

- Another Navi-Planner 4000 is used for sync.

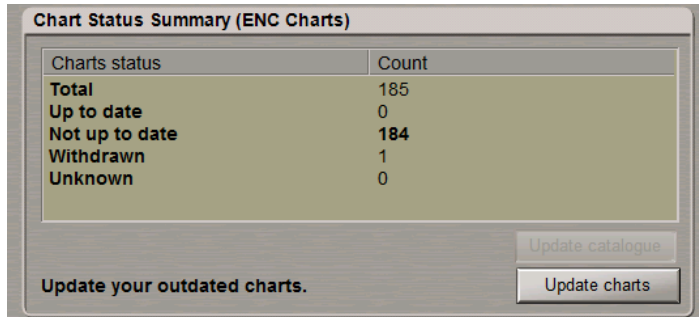
If the Navi-Planner 4000 closes down before the synchronization is done, and changes to the chart collection are made by means of a Navi-Planner 4000 on another workstation, the first Navi-Planner 4000 (when it is brought back to running) will lose its chart collection (the un-synced one) and use the most recent ECDIS collection created by the second Navi-Planner 4000.

Uncheck the **Manual synchronization** checkbox and the automatic chart synchronization occurs once the chart collection is modified.



# Chart Status Summary

The **Chart Status Summary** group is intended for displaying detailed information on the installed official charts. This information is precisely the same as in the installed charts status report.



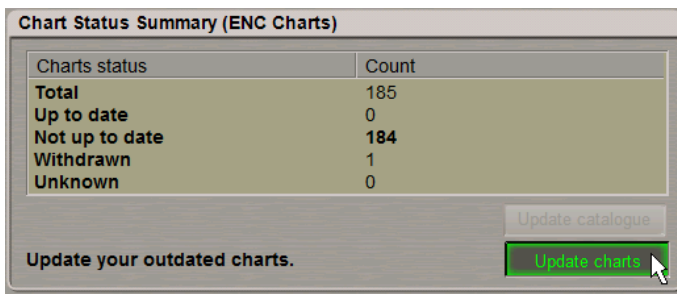
The table consists of:

- **Total** – the total number of cells available in the SENC for the content type selected for the report (either full or filtered by the route);
- **Up to date** – the total number of cells (for the content selected) which have the “Up to date” status (see below);
- **Not up to date** – the total number of cells (for the content selected) which have the “Not up to date” status (see below);
- **Withdrawn** – the total number of cells (for the content selected) which have the “Withdrawn” status (see below);
- **Unknown** – the number of cells for which the status cannot be determined for any reason (see the table below for clarification).

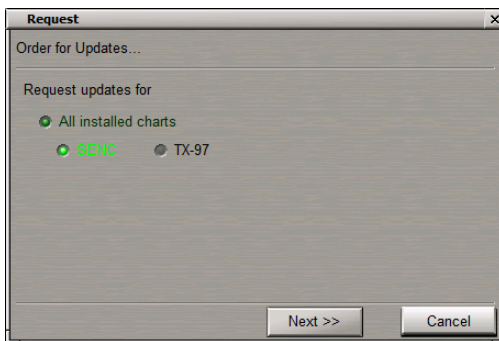
According to the *IHO DATA PROTECTION SCHEME (Edition 1.2 – January 2015)* status may have one of the four values determined according to the criteria in the following table:

STATUS MESSAGE	SPECIFICATION
Up to date	This is where the SENC has all the latest update and/or new edition information for the cell installed as defined by the latest PRODUCTS.TXT data. The reference date for the most up to date information is defined by the “ENC Update reference date” defined in 3.2 (found within the latest SERIAL.ENC file installed on the system). The ENC Update reference date must be within the last four weeks from the time of the report execution or the cell shall be displayed as “Not up to date” regardless of its status as defined by the PRODUCTS.TXT data.
Not Up to date	This is where the SENC has NOT installed all the latest update and/or new edition for the cell or. Again, the reference point for what should be installed is defined by the ENC Update reference date defined in 3.2 (found within the latest SERIAL.ENC file applied to the SENC from the data server). If the reference date is older than four weeks then cells shall be displayed as “not up to date” by definition.
Withdrawn	The number of cells which have been withdrawn by the data server or cancelled but which are still available within the SENC.
Unknown	Cells for which a status cannot be determined for any reason. If cells from a dataset with a “PARTIAL” PRODUCTS.TXT file are loaded then all cells in a data server’s service but not included in the partial PRODUCTS.TXT shall be deemed to be “Unknown” as no definitive information on them can be determined. A “FULL” PRODUCTS.TXT content is required to specify the status of all cells in a data server’s service.

For the charts update press the **Update charts** button.

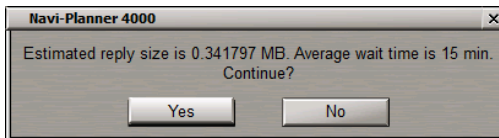


All installed charts checkbox is checked by default.

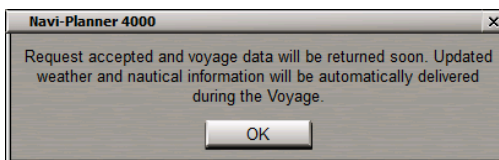


Select the necessary chart format (**SENC** or **TX-97**). Press **Next >>** button.

Estimate the size of data to be downloaded and time it would take to download it, and press the **Yes** button.

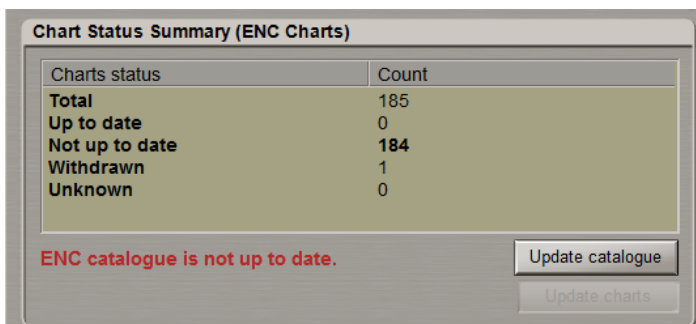


A message that the data is ordered will appear.

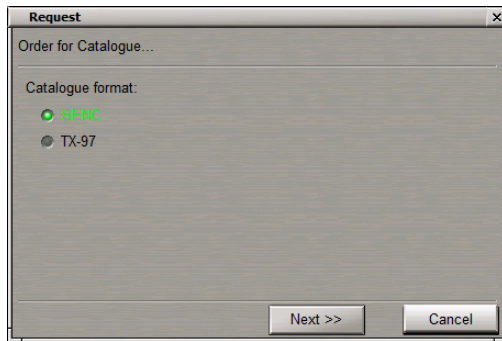


Press **OK** button.

If the Navi-Planner 4000 has no up to date catalogue, the **Chart Status Summary** group looks as follows:

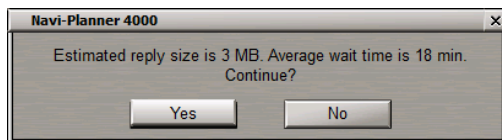


The "ENC catalogue is not up to date" warning is displayed. Press the **Update catalog** button (the button is active in this case).

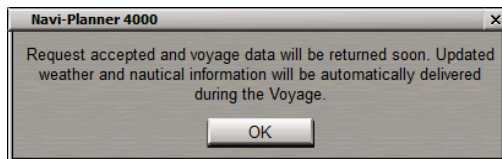


Select the necessary chart format (**SENC** or **TX-97**). Press **Next >>** button.

Estimate the size of data to be downloaded and time it would take to download it, and press the **Yes** button.



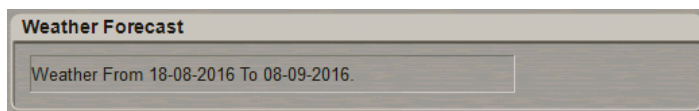
A message that the data is ordered will appear.



Press **OK** button.

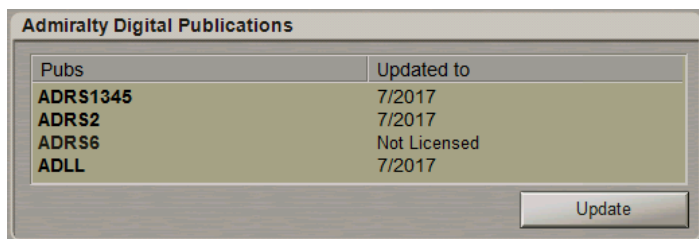
## Weather Forecast

The **Weather Forecast** group is intended for displaying the last loaded forecast period.



## Admiralty Digital Publications

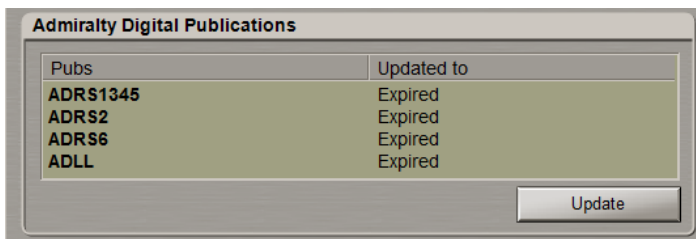
The **Admiralty Digital Publications** group is intended for displaying every ADP week.



The table includes:

- **Pubs** – list of all the publications;
- **Updated to** – number of the week up to which the ADP is updated.

If the license term for any ADP has expired, the **Updated to** column will display "Expired":



Pubs	Updated to
ADRS1345	Expired
ADRS2	Expired
ADRS6	Expired
ADLL	Expired

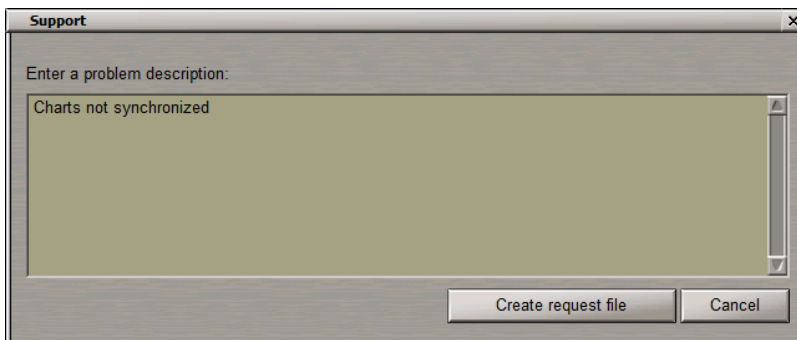
Update

## Troubleshooting Report

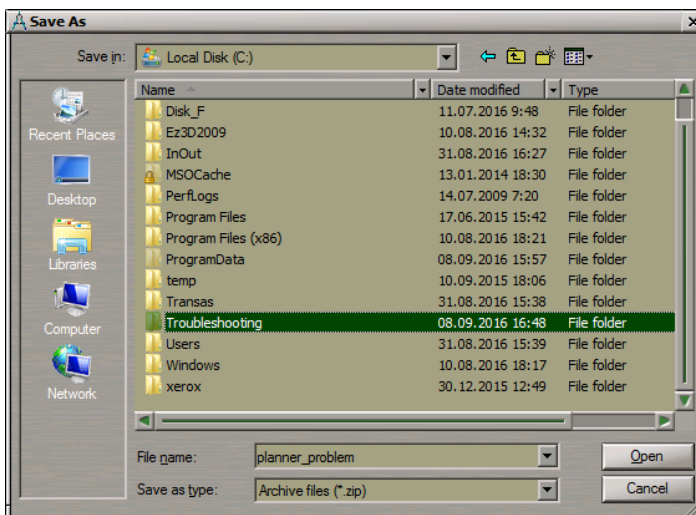
The **Troubleshooting report** group is intended for drawing the troubleshooting reports.



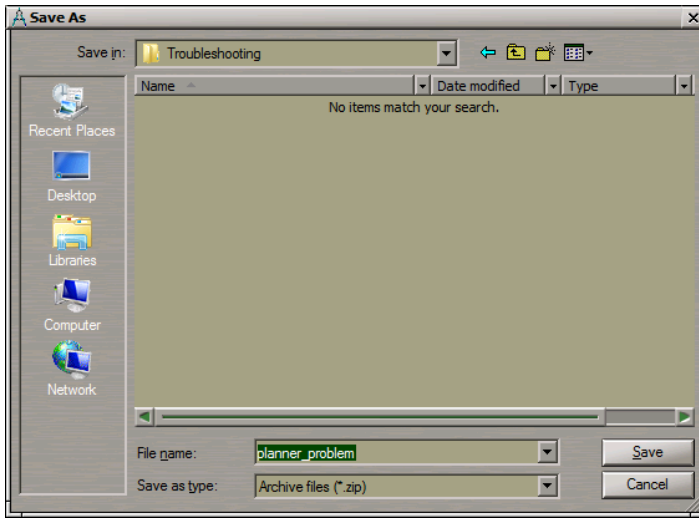
Press the **Support** button.



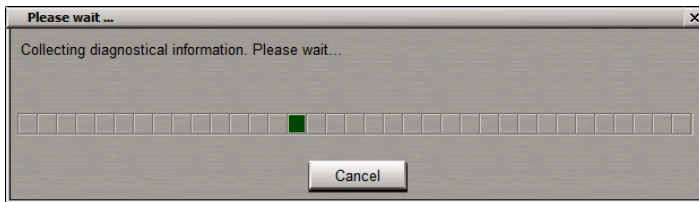
In the **Support** window that will open up, describe the problem encountered. Press the **Create request file** button.



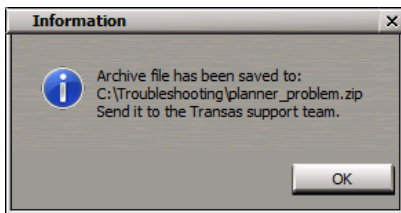
Specify the path for saving a file with the Navi-Planner 4000 configuration. Press the **Open** button.



Enter the file name and press the **Save** button.



A \*.zip file with diagnostic information will be created.



Press the **OK** button.

E-mail the created file to either [service@transas.com](mailto:service@transas.com) or [info@transas.com](mailto:info@transas.com).

# NAVI-PLANNER 4000

USER MANUAL

VERSION 3.02.347

## **Technical support**

Phone number +46 771 460 100

E-mail [Info@transas.com](mailto:Info@transas.com)

[www.transas.com](http://www.transas.com)

**TRANSAS**

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