5 **Add as many WPTs as required in the same way.**

> **Memo**
> When Use Assistant circle is not used for creation of the next WPT, clear the item by clicking on [Use Assistant circle].

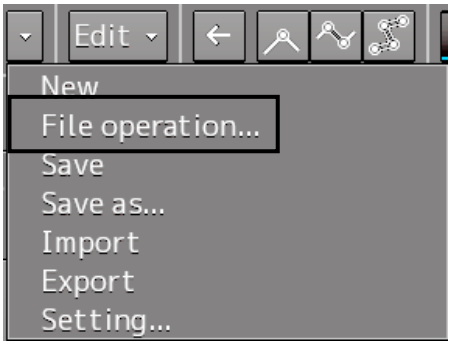
6 **After creating the last WPT, double click the left button or click the right button.**

The Route planning is terminated.

9.7.3 Editing a route by graphic editing

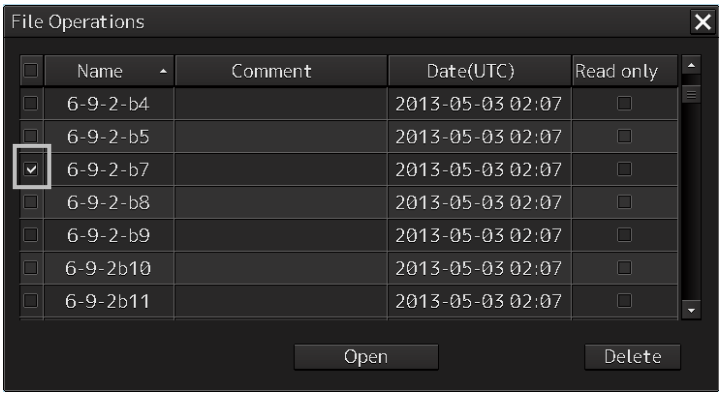
1 **Click on the [Open] button on the Route Planning bar.**

Or select the [File operation...] button that is displayed by clicking on the Route Planning menu button.



The "File operation..." dialog box appears.

2 **Select the route file to be edited and click on the [Open] button.**



> **Memo**
> If [Read only] is selected, the file overwrite function is disabled. To overwrite the existing file, clear the item before opening the file.

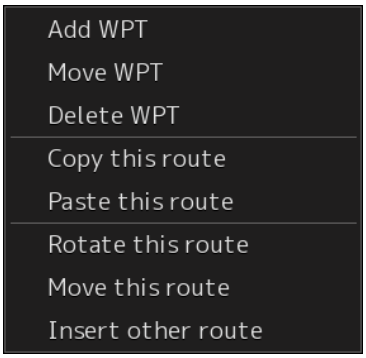
3 **Edit the route with graphic editing.**

Refer to the following for the editing methods.

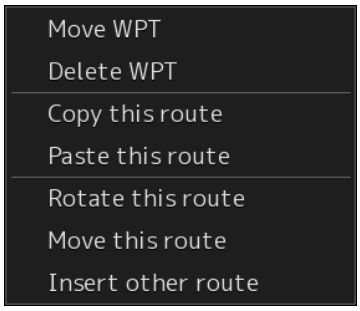
Editing operations that are allowed by clicking on WPT or a leg of the route.

Editing function	Related section
Inserting WPT between WPTs	9.7.3.1 Inserting a WPT between WPTs
Moving WPT	9.7.3.2 Moving a WPT
Changing XTL (cross track limit)	9.7.3.3 Changing XTL (cross track limit)

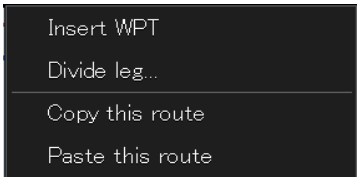
Operations that are allowed on the context menu that is displayed by clicking the right mouse button on WPT or a leg of the route



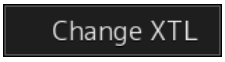
WPT0 or the last WPT is selected



WPT other than WPT0 and the last WPT is selected



A leg is selected



XTL is selected

Menu	Function	Related section
Add WPT	Adds WPT.	9.7.3.4 Adding WPT on the context menu
Move WPT	Moves WPT.	9.7.3.5 Moving WPT on the context menu
Delete WPT	Deletes WPT.	9.7.3.6 Deleting WPT on the context menu
Copy this route	Copies the entire route.	9.7.3.7 Copying and merging a route on the context menu
Paste this route	Pastes the copied route on to another route file.	
Rotate this route	Rotates the route.	9.7.3.8 Rotating a route on the context menu
Move this route	Moves the route.	9.7.3.9 Moving a route on the context menu
Insert other route	Inserts another dialog into the route that is being edited.	9.7.3.10 Merging other route on the context menu
Insert WPT	Inserts WPT between WPTs.	9.7.3.11 Inserting WPT between WPTs on the context menu
Divide leg...	Displays a leg division dialog. Divides the leg in the dialog.	9.7.3.12 Dividing a leg on the context menu
Change XTL	Changes the XTL (cross track limit).	9.7.3.13 Changing XTL (cross track limit) on the context menu

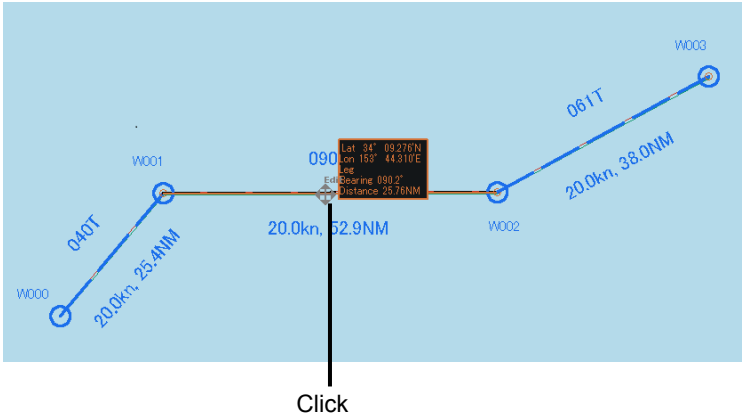
4 After completing editing, save the route file.

For the details of how to save the file, refer to "9.5 Saving a Route".

9.7.3.1 Inserting a WPT between WPTs

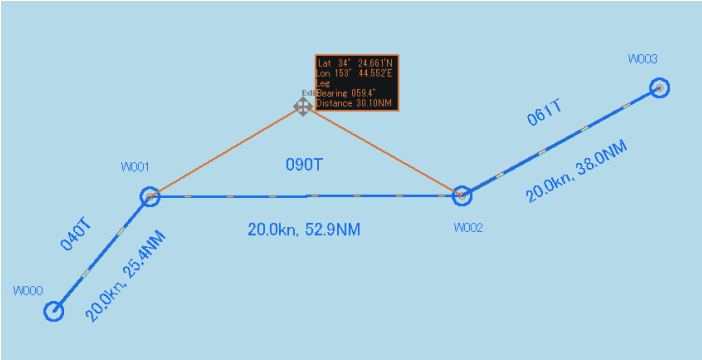
1 Click the left button on the leg between the WPTs in which a WPT is to be inserted.

The leg is set to a selected state.



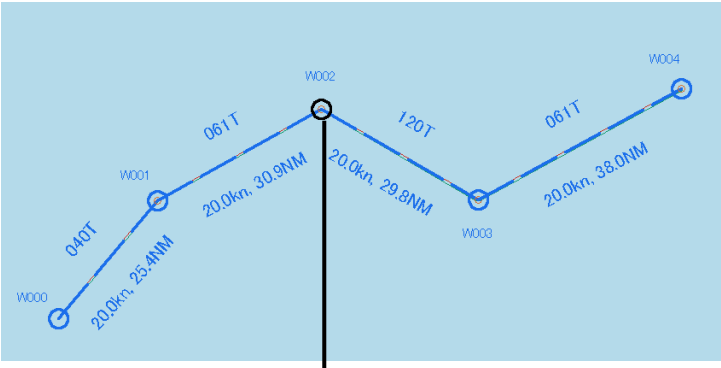
2 **Determine the WPT insertion position by moving the cursor.**

A rubber band is displayed.



3 **Click the mouse button.**

A WPT is added.



WPT that was added

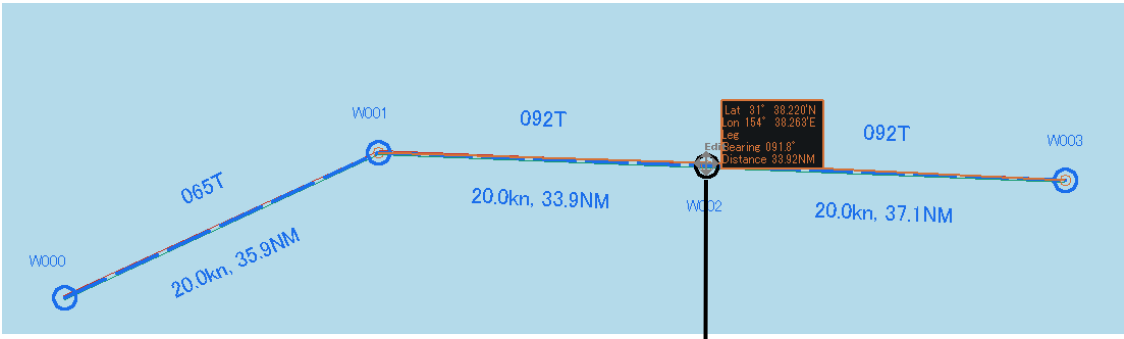
Cancelling the addition operation

The addition operation can be cancelled by clicking the right button instead of clicking at Step 3.

9.7.3.2 Moving a WPT

1 **Click on the WPT to be moved.**

The WPT is set to a selected state.



Click.

2 **Move the WPT to any position.**

A rubber band covering from the WPTs at the front and back to the cursor is displayed.

*In the case of WPT0 or the last WPT, a rubber band is displayed from one side.

3 **Click the mouse button.**

The move is determined.

Cancelling the move operation

The move operation can be cancelled by clicking the right button instead of clicking at Step 3.

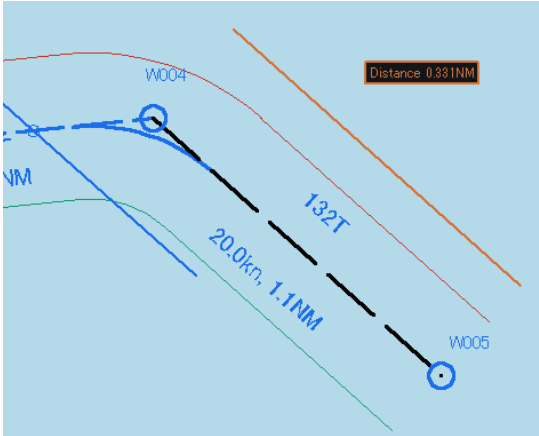
9.7.3.3 Changing XTL (cross track limit)

1 Click on the XTL.

The cursor is changed to the XTL change mode.

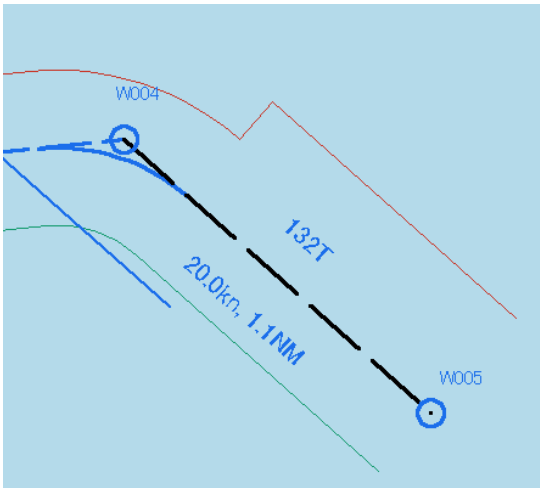
2 Move the cursor and change the XTL.

Use the information (XTL distance) that is displayed near the cursor and the line that is linked to the cursor as the guideline.



> **Note**
> The line cannot be moved exceeding the limit of XTL (9.99 NM).

3 Click the mouse button.



The width of the XTL is changed.

Cancelling the change operation

The change operation can be cancelled by clicking the right button instead of clicking at Step 3.

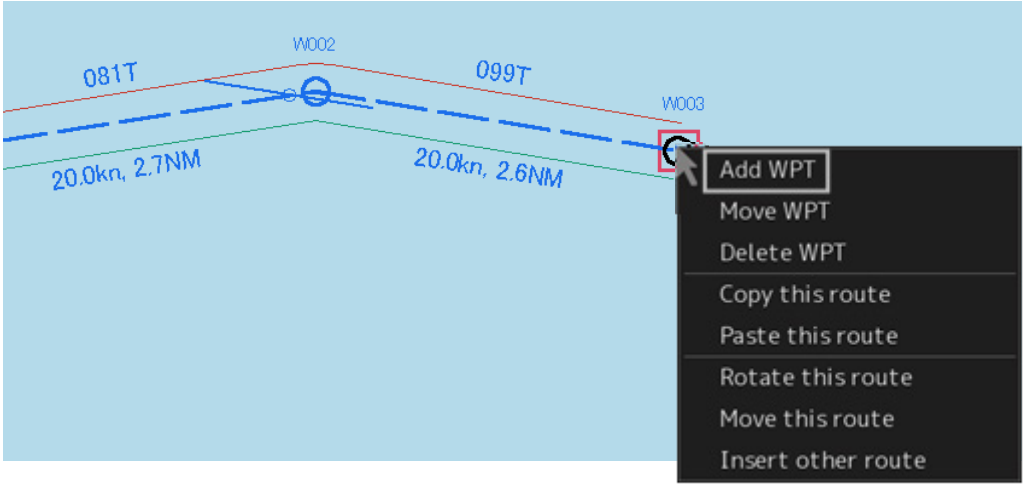
9.7.3.4 Adding WPT on the context menu

Add a WPT to WPT0 or the last WPT.

1 Click the right mouse button on WPT0 or the last WPT.

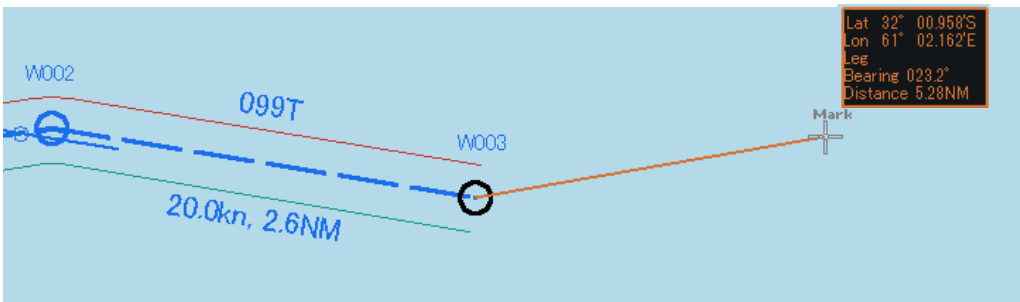
The context menu is displayed.

2 Click [Add WPT] on the context menu.

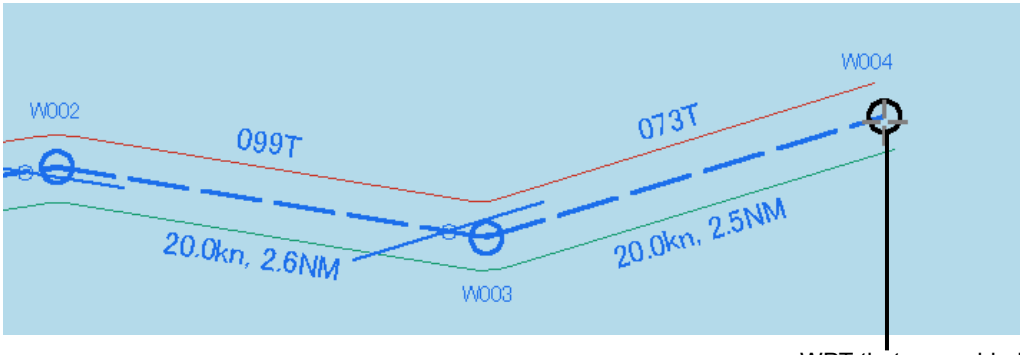


The cursor changes to the WPT addition mode.

3 Move the cursor on the position of the WPT to be added.



4 Click the mouse button.



WPT that was added

WPT is added.

> **Note**
> In the case of ARCS, when WPT is specified at a position other than the active chart and another panel exists at the positon, the panel display changes automatically.

Cancelling the addition operation

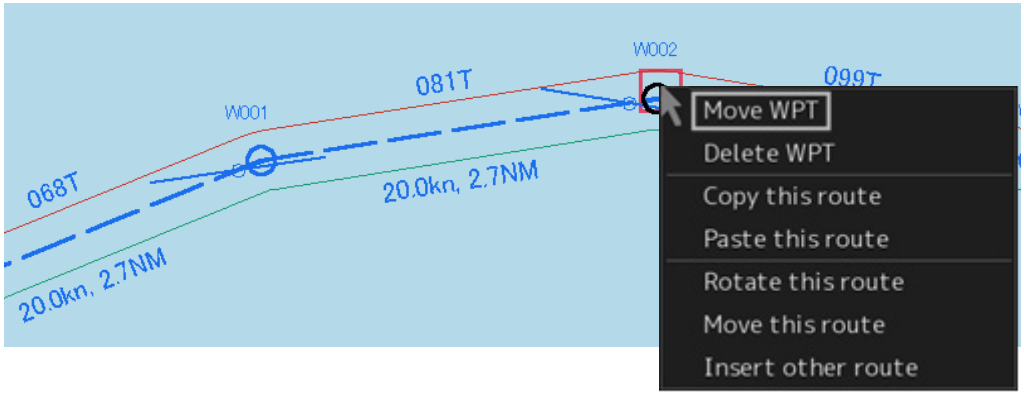
The addition operation can be cancelled by clicking the right button instead of clicking at Step 4.

9.7.3.5 Moving WPT on the context menu

1 Click the right button on the WPT to be moved.

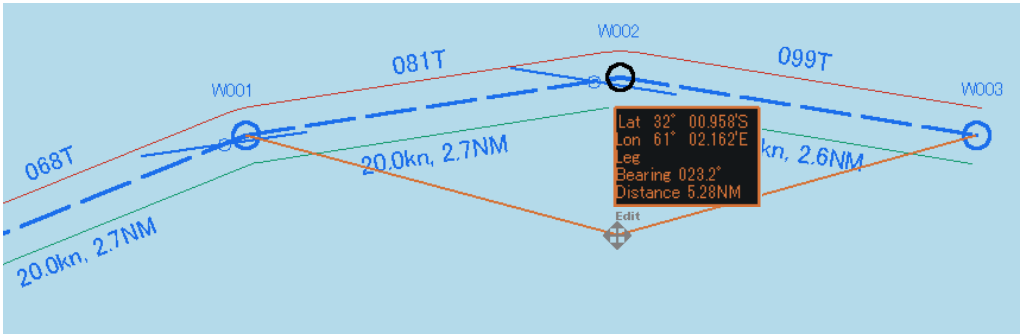
The context menu is displayed.

2 Click Love WPT] on the context menu.

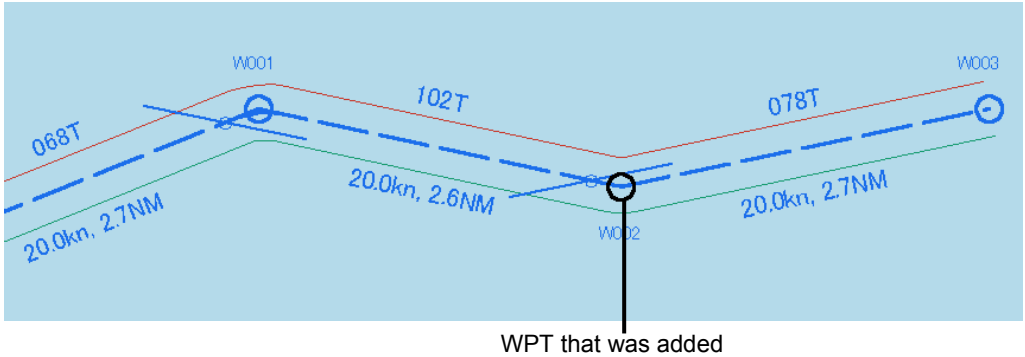


The cursor mode changes to the WPT move mode.

3 Move the cursor to the required position.



4 Click the mouse button.



WPT that was added

Cancelling the addition operation

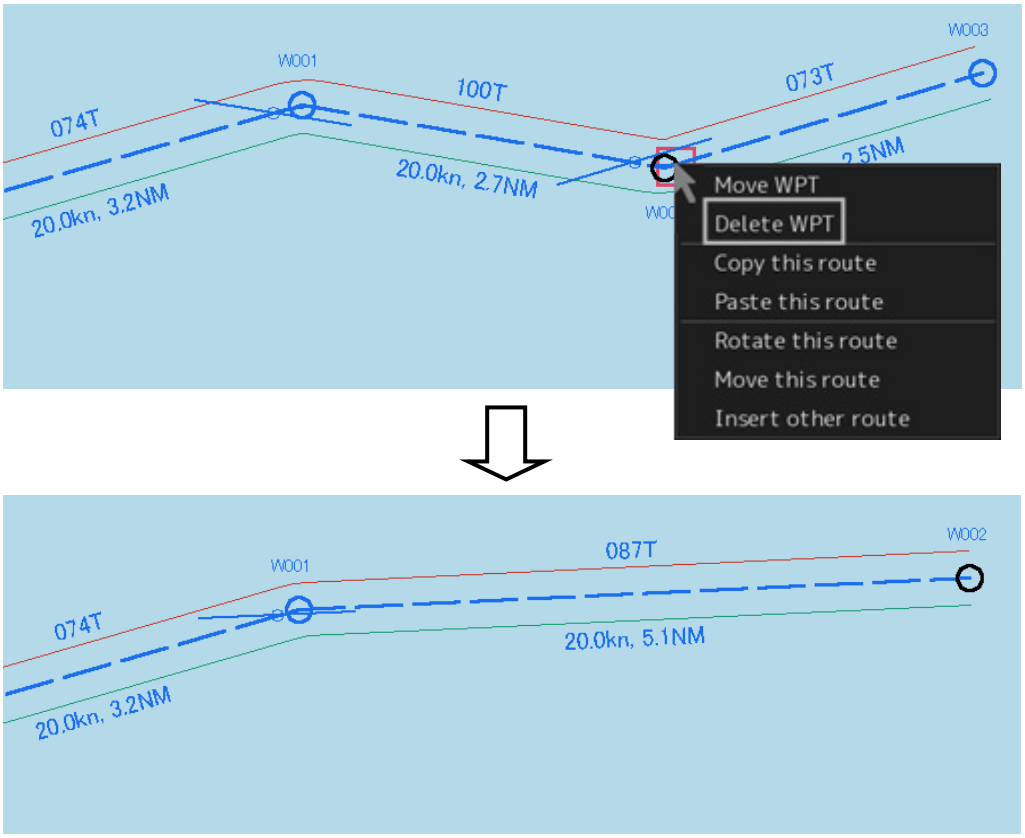
The addition operation can be cancelled by clicking the right button instead of clicking at Step 4.

9.7.3.6 Deleting WPT on the context menu

1 Click the right button on the WPT to be deleted.

The context menu is displayed.

2 Click [Delete WPT] on the context menu.



The WPT is deleted.

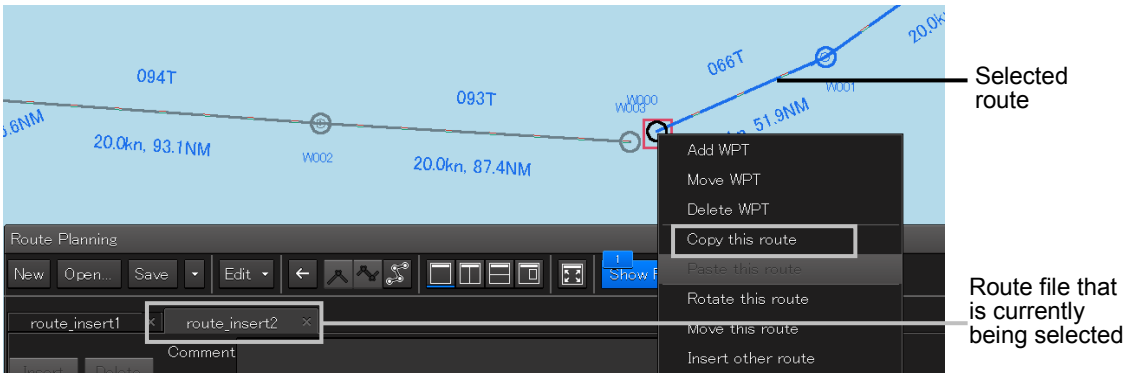
9.7.3.7 Copying and pasting a route on the context menu

A route can be copied and pasted on to another route file.

1 Click the right button on a WPT of the route to be copied.

The context menu is displayed.

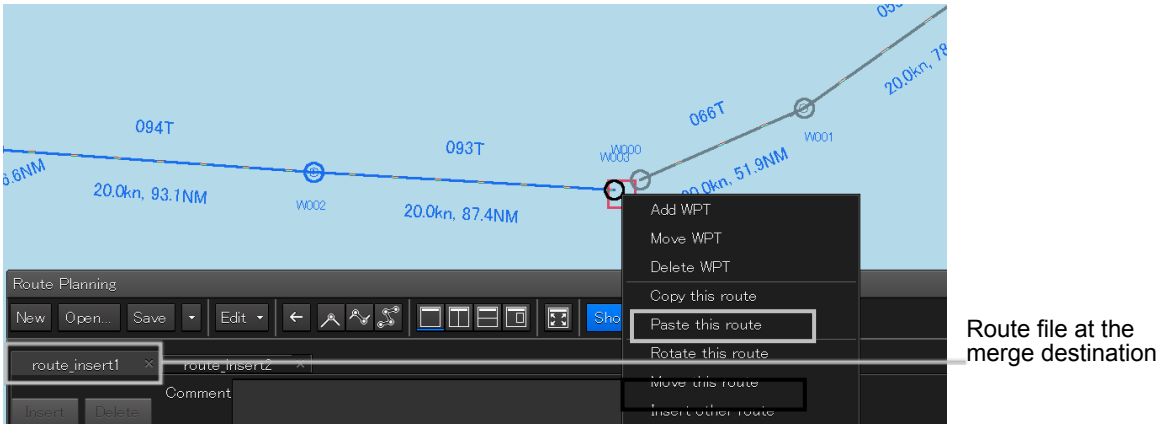
2 Select [Copy this route] on the context menu.



The route is copied.

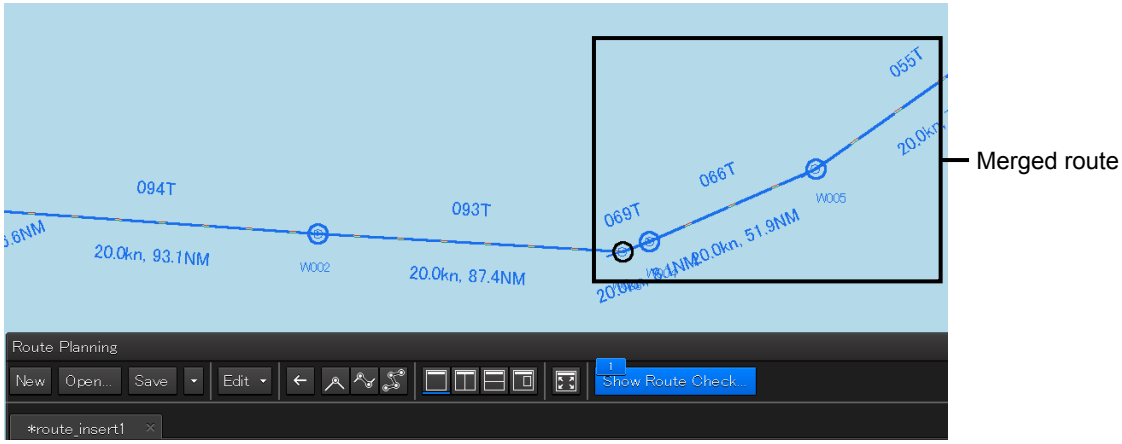
3 Open the route file of the merge destination by switching the tab.

4 Select the route to be merged and click the right button.



5 Click on [Paste this route] (merging routes) in the context menu.

The copied route is merged with the selected route.



Note

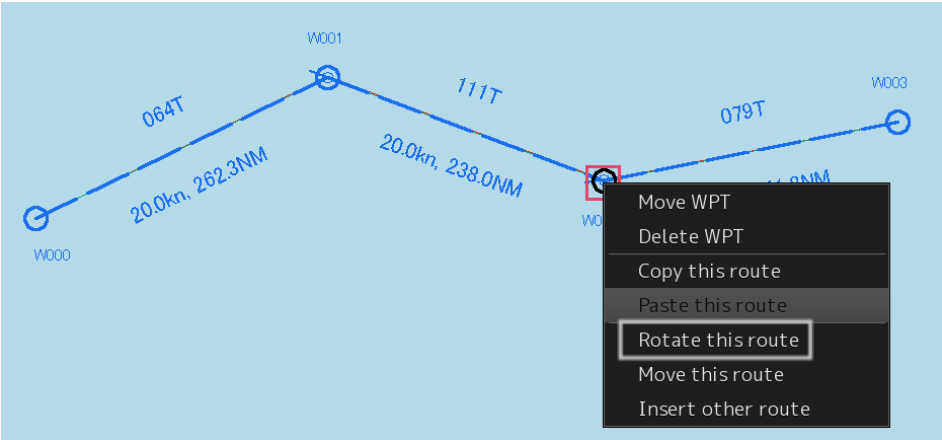
At pasting, Course, Distance, Total Distance, ROT, TTG, and ETA are recalculated. When a Route planning error occurs as a result, an error message is displayed and insertion and linkage are not performed. For the error messages that are displayed, refer to "9.12 Error Messages that are Displayed when a Route is Created".

9.7.3.8 Rotating a route on the context menu

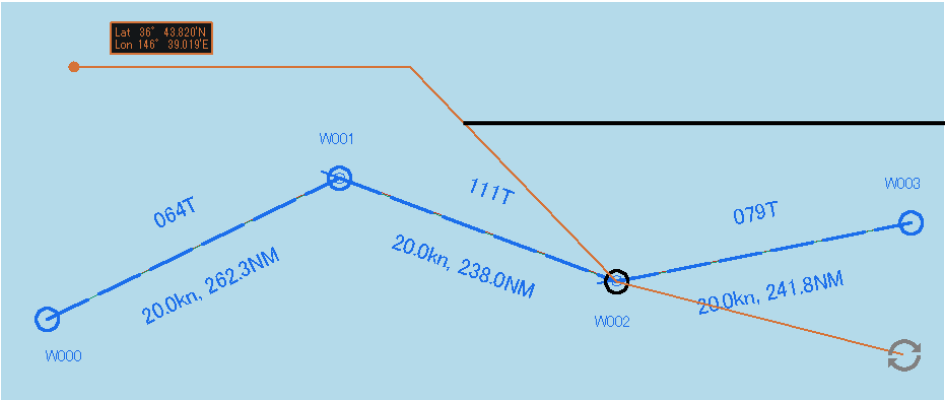
1 Click the right mouse button on the WPT No. that is used as the reference of rotation.

The context menu is displayed.

2 Click [Rotate this route] on the context menu.

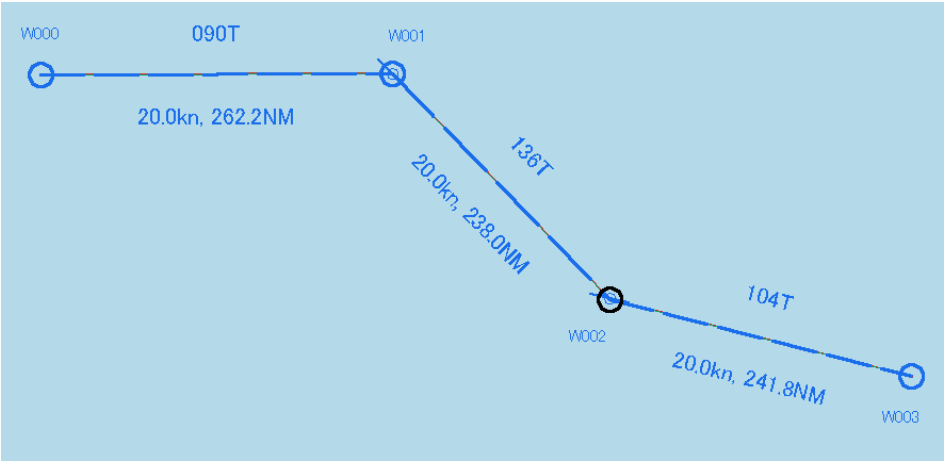


3 Rotate the route.



The route rotates based on the selected WPT

4 **Click the mouse button.**



Cancelling the addition operation

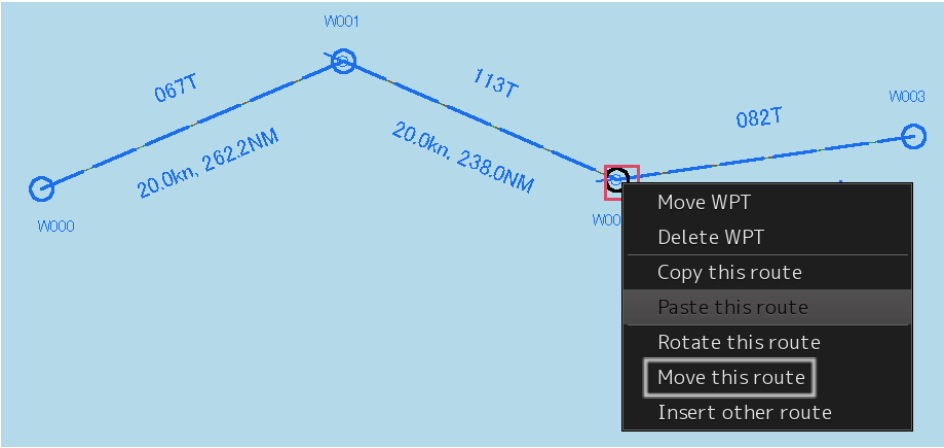
The addition operation can be cancelled by clicking the right button instead of clicking at Step 4.

9.7.3.9 Moving a route on the context menu

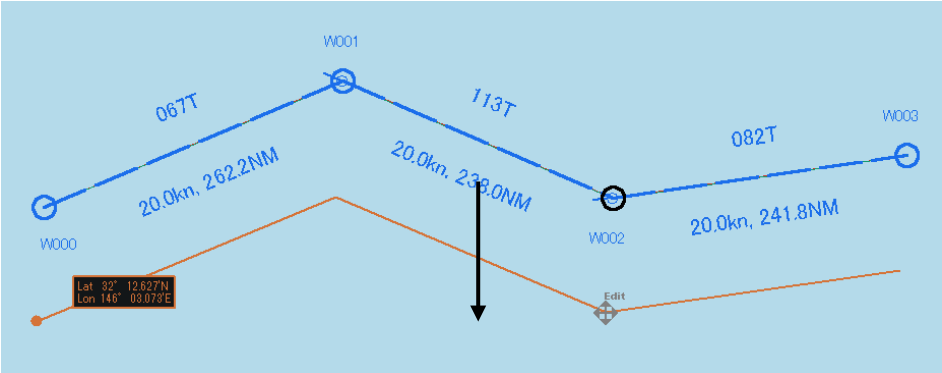
1 **Click the right mouse button on the WPT of any of the routes to be moved.**

The context menu is displayed.

2 **Click [Move this route] on the context menu.**



3 **Move the route.**



4 **After positioning the route, click the mouse button.**

Cancelling the addition operation

The addition operation can be cancelled by clicking the right button instead of clicking at Step 4.

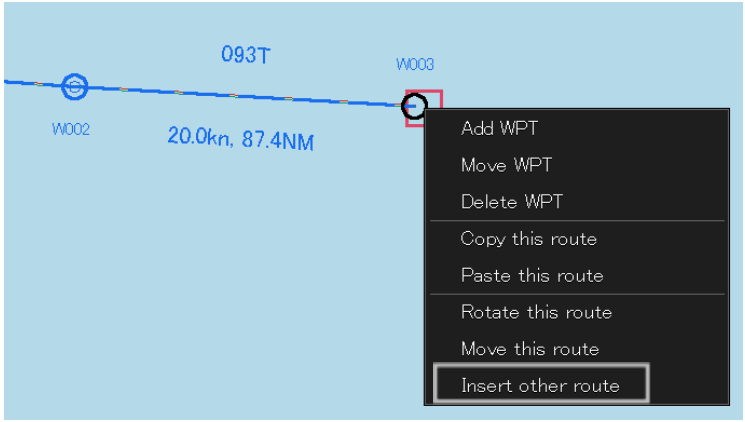
9.7.3.10 Merging other route on the context menu

Merge the route of another file with the last WPT of the route.

1 Click the right mouse button on WPT No.

The context menu is displayed.

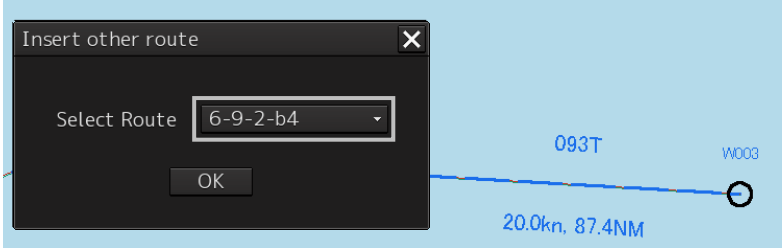
2 Click on [Insert other route] in the context menu.



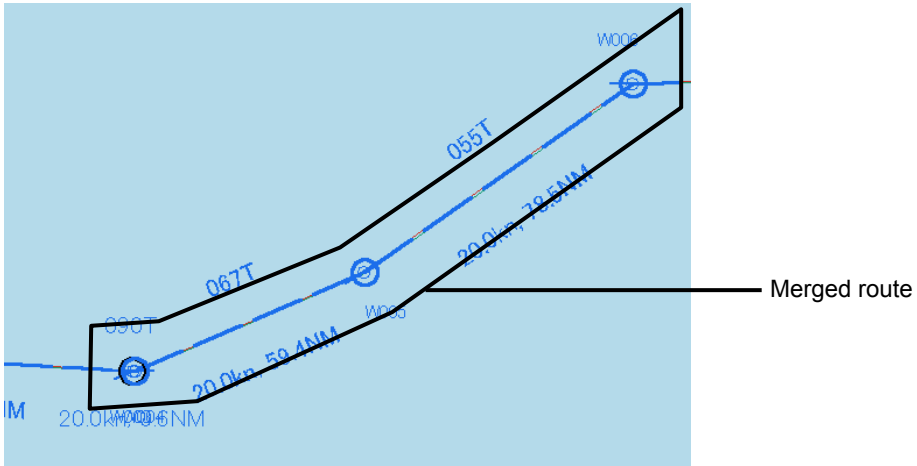
The "Insert other route" dialog is displayed.

3 Click on the route file to be merged from the [Select Route] combo box.

4 Click on the [OK] button.



The route file is merged.



Note

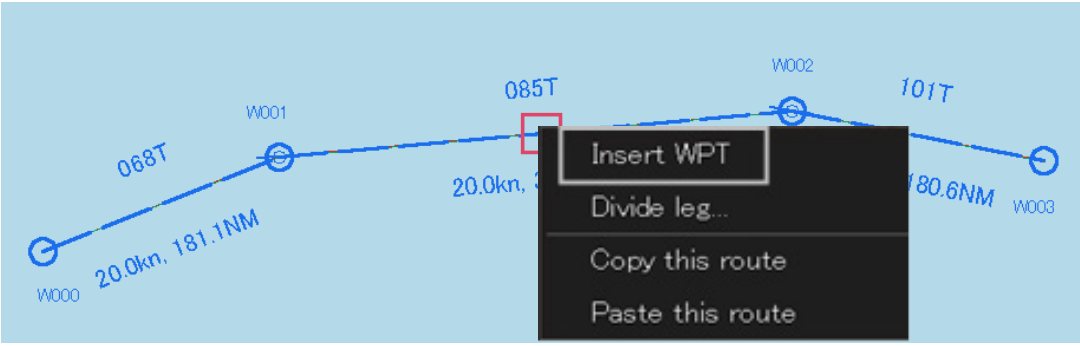
When the range exceeded the insertion allowed range, an error message is displayed and the route will not be inserted.

9.7.3.11 Inserting WPT between WPTs on the context menu

1 Click the right mouse button on the leg between the WPTs within which WPT is to be inserted.

The context menu is displayed.

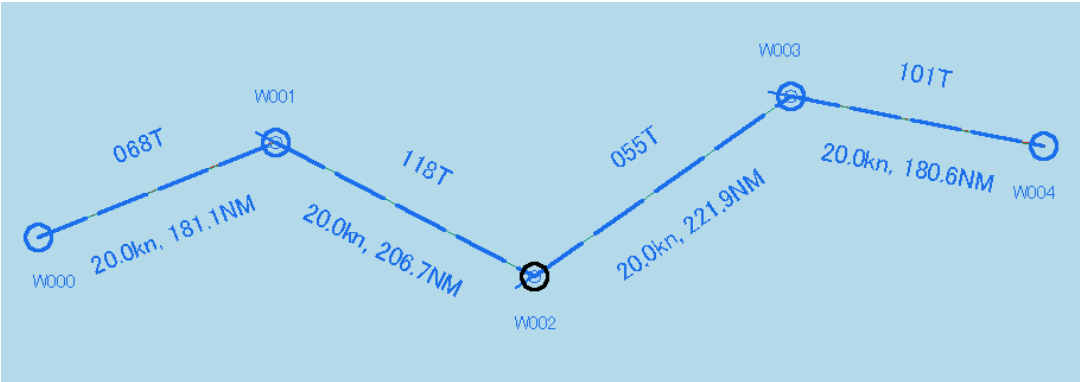
2 Click [Insert WPT] on the context menu.



The cursor mode changes to the WPT insertion mode.

3 Move the cursor to the position in which WPT is to be inserted.

4 Click the mouse button.



WPT is inserted.

Cancelling the insertion operation

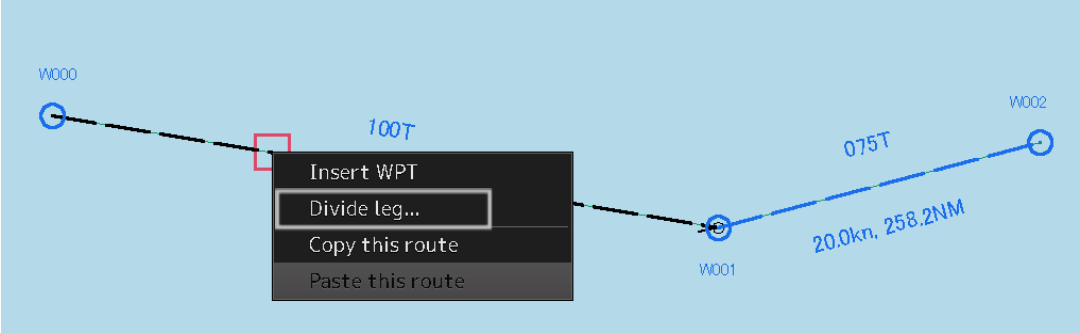
The insertion operation can be cancelled by clicking the right button instead of clicking at Step 4.

9.7.3.12 Dividing a leg on the context menu

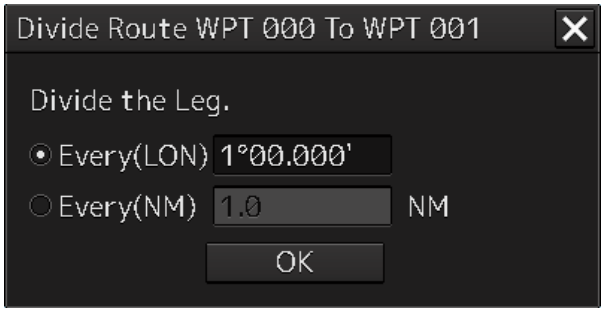
1 Click the right mouse button on the leg of the route to be divided.

The context menu is displayed.

2 Click [Divide leg...] on the context menu.



The "Divide Route" dialog box appears.



3 Input a division interval.

[Every(LON)] (longitude division)

1) Click on "Every(LON)".

2) Enter a longitude division interval.

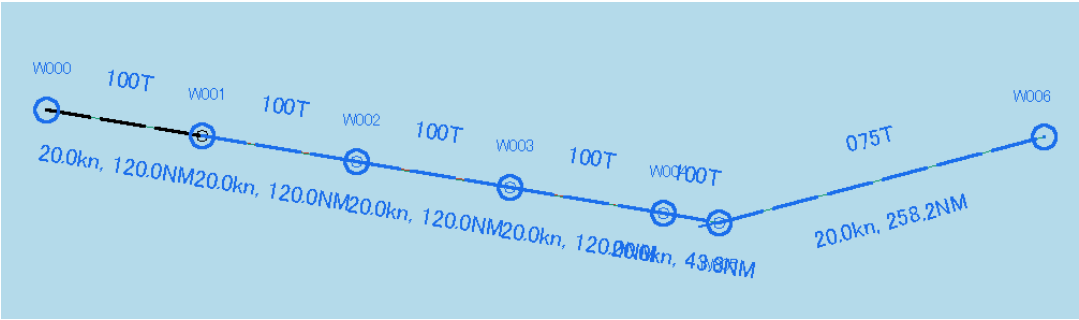
[Every(NM)] (nautical mile division)

1) Click on "Every(NM)".

2) Enter a nautical mile division interval.

4 Click on the [OK] button.

The leg that was selected in Step 1 is divided in the unit specified in Step 3.



Note

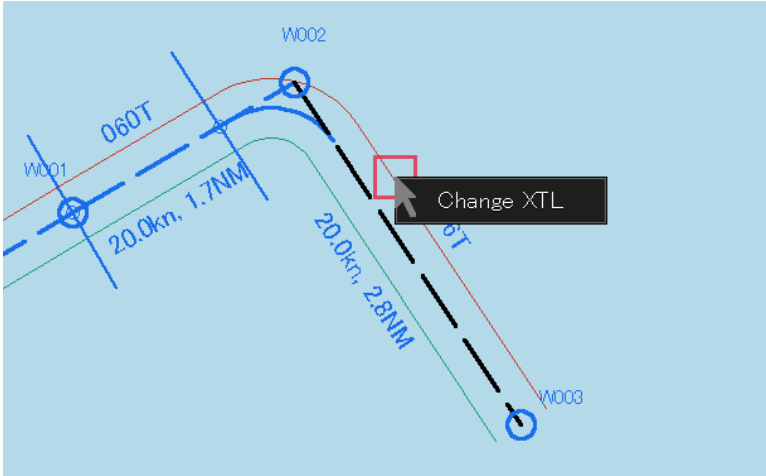
When the total number of WPTs exceeds the maximum value of 511 as a result of leg division, leg division is executed within the range that does not exceed 511 in the entire course.

9.7.3.13 Changing XTL (cross track limit) on the context menu

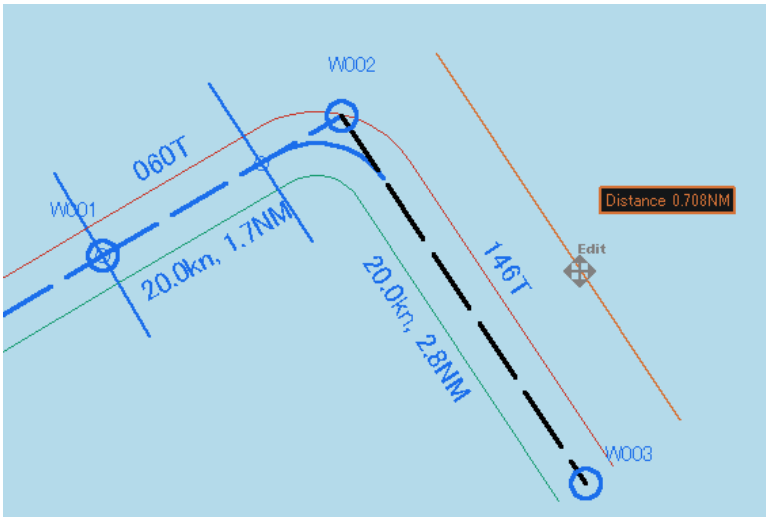
1 Click the right mouse button on XTL.

The context menu is displayed.

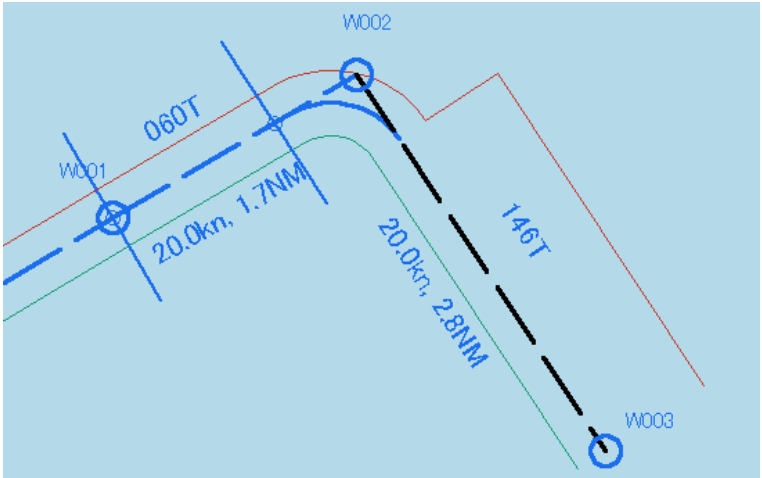
2 Click [Change XTL] on the context menu.



3 Change the width of XTL by moving the cursor.



4 **Click the mouse button.**



The XTL width is changed.

Cancelling the operation

The operation can be cancelled by clicking the right button instead of clicking at Step 4.

9.8 Creating an Alternate Route

An alternate route can be created during sailing by referencing the route that is displayed on the screen. The alternate route can be saved by overwriting during monitoring or by assigning a new name.

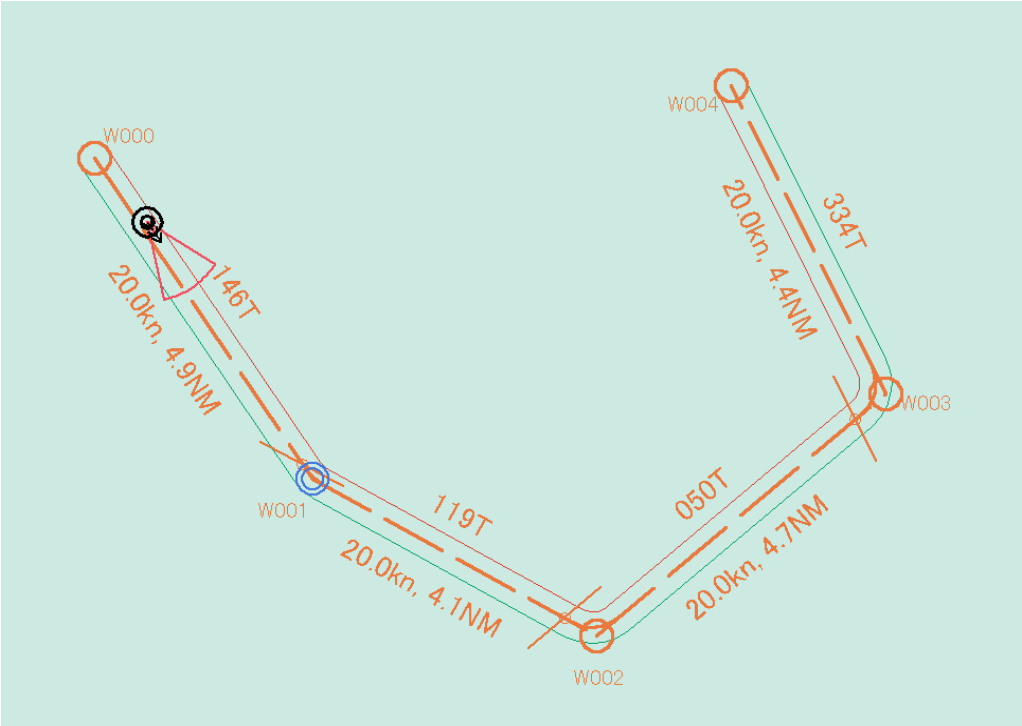
The following two charts indicate the original route and the changed alternate route. As shown below, an alternate route is created while the original route is displayed during creation of an alternate route. In the example below, the following WPTs are changed.

- W001 Position (shift)
- W002 (Insertion. As a result, the following WPT number is incremented by 1.)
- W006 (One WPT is added to the last WPT.)

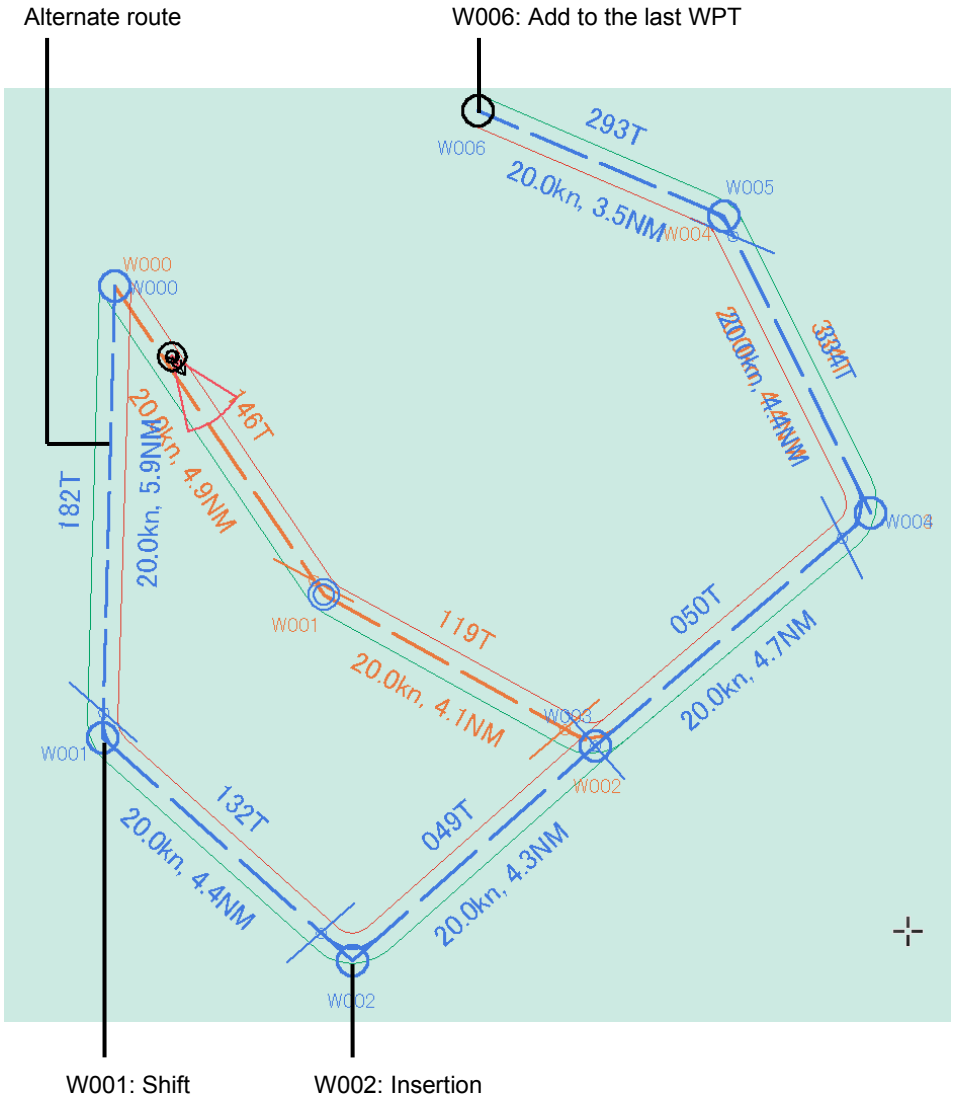
Memo

The alternate route is displayed in light blue to distinguish the changed section from the original route.

Original route



Original route and alternate route

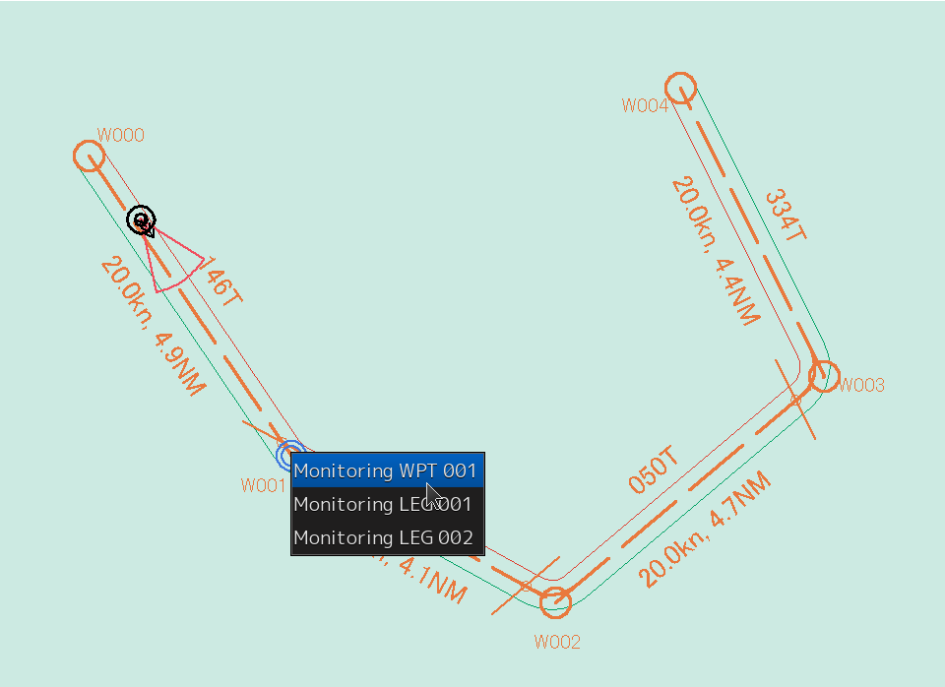


9.8.1 Creating an alternate route

1 Click the right mouse button on the WPT or leg of the route that is being monitored.

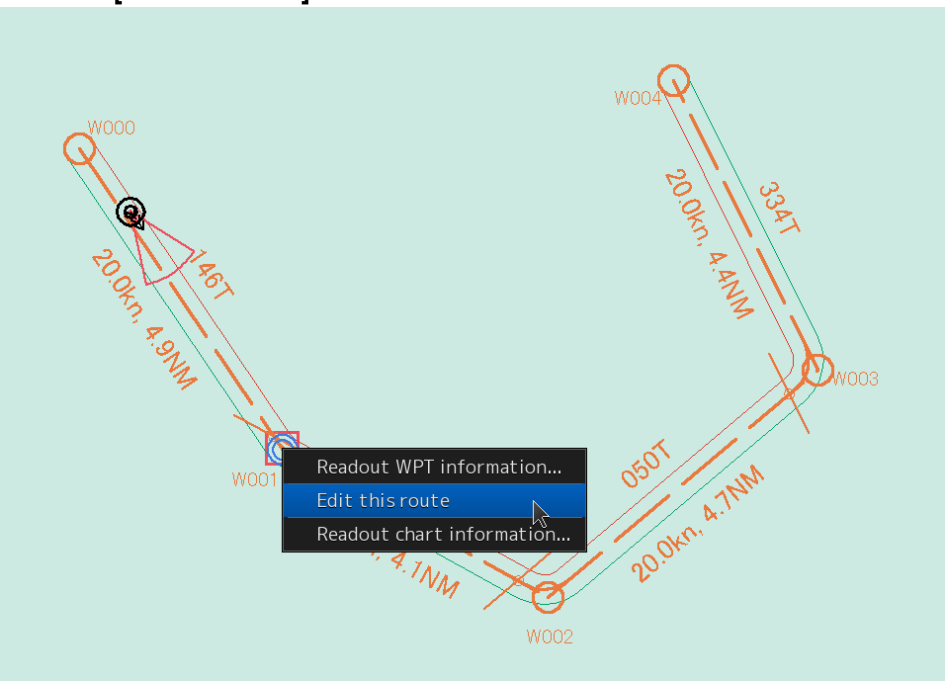
The context menu is displayed.

2 Click on [Monitoring WPT xxx] or [Monitoring LEG xxx] of the context menu.



The context menu is displayed.

3 Click on [Edit this route] of the context menu.



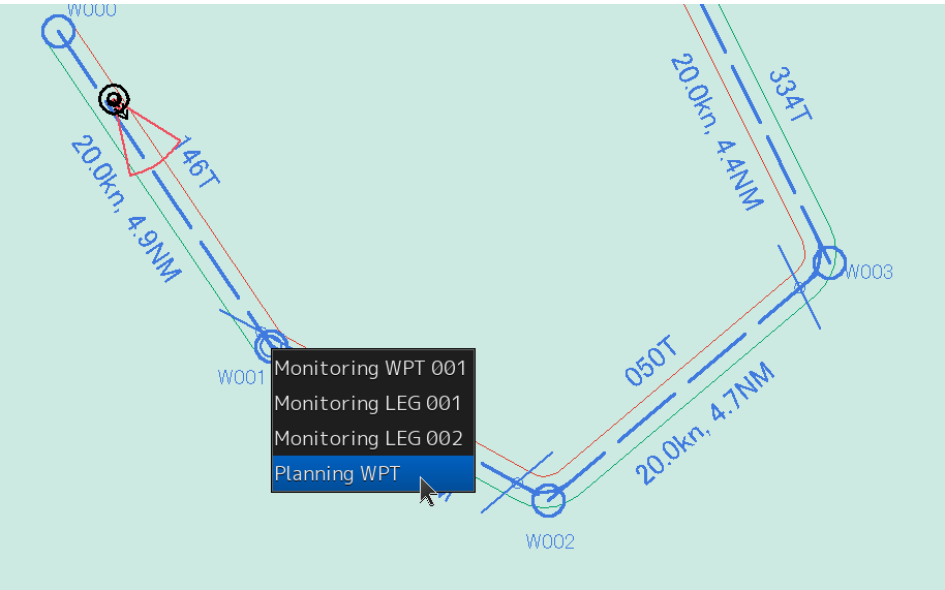
The “Route Planning” dialog is displayed.

4 **For table editing, edit the route by using the same procedure as that from Step 3 of "9.6.4 Editing a route by table editing".**

5 **For graphic editing, click the right mouse button on the WPT or leg of the route that is being monitored.**

The context menu is displayed.

6 **Click on [Planning WPT] or [Planning LEG] of the context menu.**



The context menu for editing WPT or leg is displayed.

7 **Edit the route by using the same procedure as from Step 3 of "9.7.3 Editing a route by using graphic editing".**

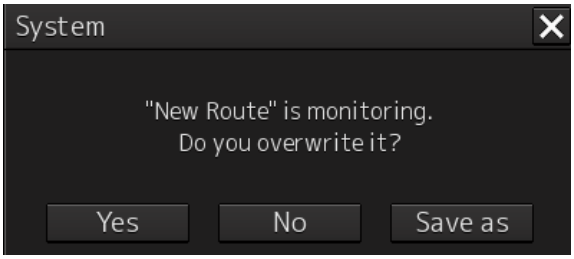
9.8.2 Saving an alternate route

9.8.2.1 Overwriting without changing the file name

1 **Click on the [Save] button.**

A confirmation dialog is displayed.

2 **Click on the [YES] button.**



The alternate route is displayed and used instead of the original route.

Note

In this case, the route name that is currently monitored remains unchanged. The original route file no longer exists since it is overwritten.

9.8.2.2 Saving the file by naming

1 Click on the [Save as] button on the route plan menu of the route plan bar.

The “Save as Route File” dialog is displayed.

2 Enter a new file name and click on the [Save] button.

The alternate route is displayed and used instead of the original route.

Note

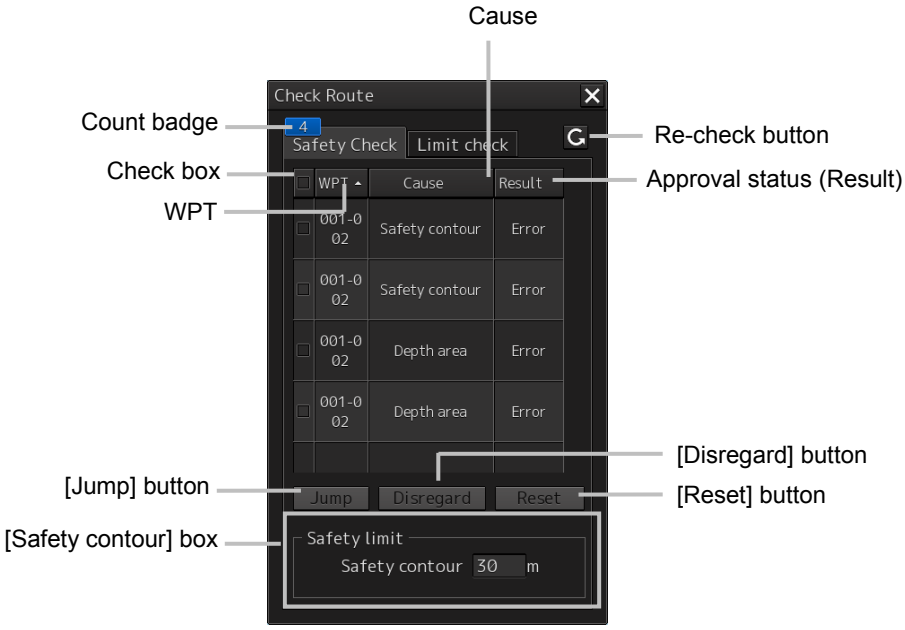
In this case, the route name that is being monitored is changed to the file name that was entered. The original route file remains.

9.9 Checking Route Data

Route data is constantly checked based on the safety standards and limits.
These items are checked on the "Check Route" dialog box.
The "Check Route" dialog box appears by clicking on the [Show Route Check] button on the Route Planning bar.

9.9.1 Checking a route based on the safety standards

The result of safety check is displayed on the "Safety check" tab.



When safety errors are detected, the number of errors is displayed on the count badge. When the error count exceeds 999, "More" is displayed instead of the count.

The list of Cause and Result of the errors that were detected is displayed for each WPT prior to and following the error occurrence point. The following causes are displayed.

Cause
Traffic separation zone.
Traffic crossing.
Traffic roundabout.
Traffic precautionary.
Two way traffic.
Deeper water route.

Cause
Recommended traffic lane.
Inshore traffic zone.
Fairway.
Restricted area.
Caution area.
Offshore production area.
Military practice area.
Seaplane landing area.
Submarine transit area.
Ice area.
Channel.
Fishing ground.
Fishing prohibited.
Pipeline area.
Cable area.
Anchorage area.
Anchorage prohibited.
Dumping ground.
Dredge area.
Cargo transshipment area.
Incineration area.
Specially protected area.
Safety contour
Coast line
Obstruction
Under water rock
Wreck
Spoil ground.
Sensitive sea area.
Archipelagic sea lane.
Marine farm/aquaculture.
Approaching buoy/light.
Dangerous symbol.
Dangerous line.
Dangerous area.
Depth area
Sounding
PSSA (Particularly Sensitive Sea Area)
Areas to be avoided

Updating an error list

By clicking on the Re-check button, the latest error information is displayed by rechecking the information.

Sorting error display

By clicking on any of the items on the title line, error display can be sorted based on the item. A sort mark (▲ or ▼) is displayed on the title of the selected item.

Whenever an item is clicked on, the error display is sorted based on the ascending (▲) or the descending (▼) order.

Selecting an error to be processed

Select the check box of the error to be processed. To select all the errors, select the check box on the title line.

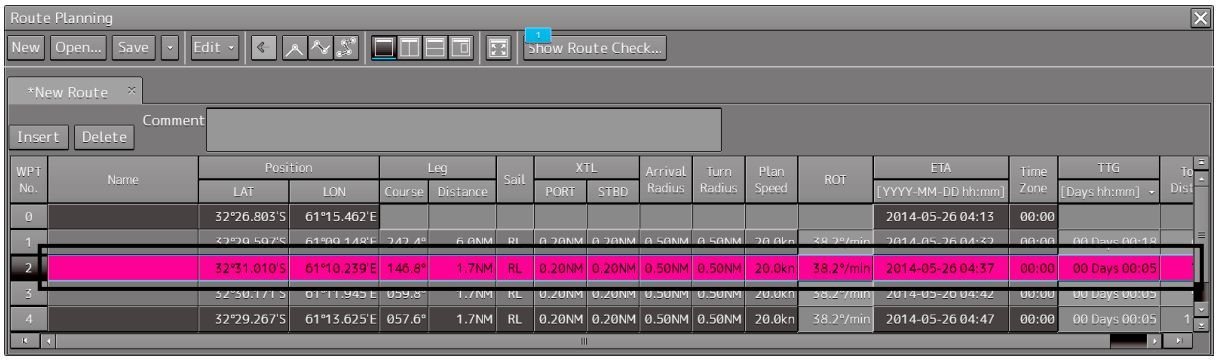
When the [Jump] button is clicked on, control jumps to the occurrence point of the error that was selected on the error list.

Ignoring an error

Click on the [Disregard] button. To restore the error that was once ignored, click on the [Reset] button.

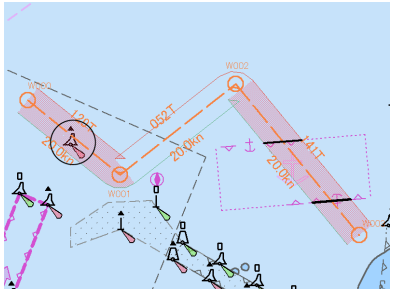
Checking an error target on the list

When an error is detected, the WPT under which the error occurred is highlighted in red.



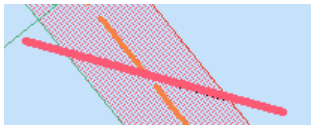
Checking an error target on the route

When an error is detected, the error target WPT and the leg are highlighted as follows.

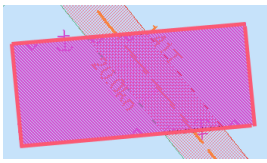


When error display is clicked on the error list, the symbol, line, and area of the error target are highlighted.

Symbol



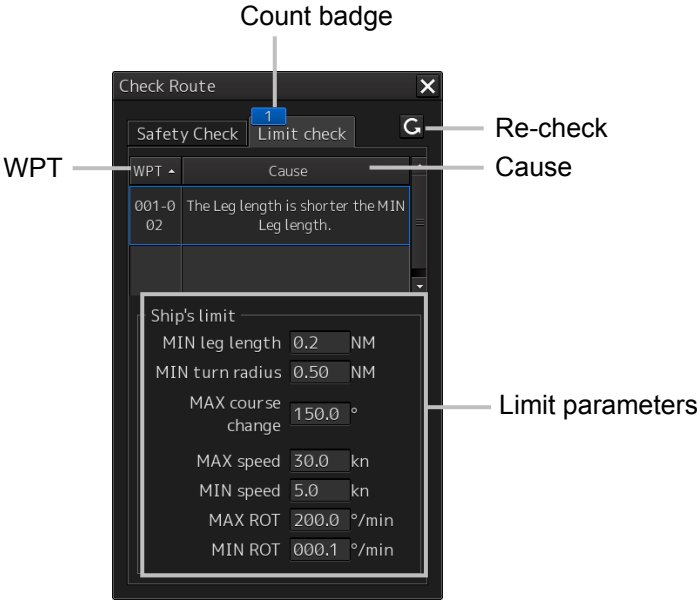
Line



Area

9.9.2 Checking a route based on the limits

The result of limit check is displayed on the "Limit check" tab.



When limit errors are detected, the error count is displayed on the count badge. When the error count exceeds 999, "More" is displayed instead of the count.

The cause of the error that was detected is displayed for each of WPTs prior to and following the error occurrence point.

The following causes are displayed.

Cause
The planned radius is beyond the MAX turn radius.
The planned radius is under the MIN turn radius.
The course angle of leg is beyond the MAX course angle.
The planned speed is beyond the MAX planned speed.
The planned speed is under the MIN planned speed.
The planned ROT is beyond the MAX ROT.
The planned ROT is under the MIN ROT.
The Leg length is shorter the MIN Leg length.
The straight route cannot be created.

Updating error display

By clicking on the re-check button, the latest error information is displayed by rechecking the information.

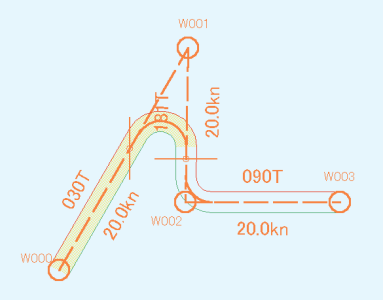
Sorting error display

By clicking on any of the items on the title line, error display can be sorted based on the item. A sort mark (▲ or ▼) is displayed on the title of the selected item.

Whenever an item is clicked on, the error display is sorted based on the ascending (▲) or the descending (▼) order.

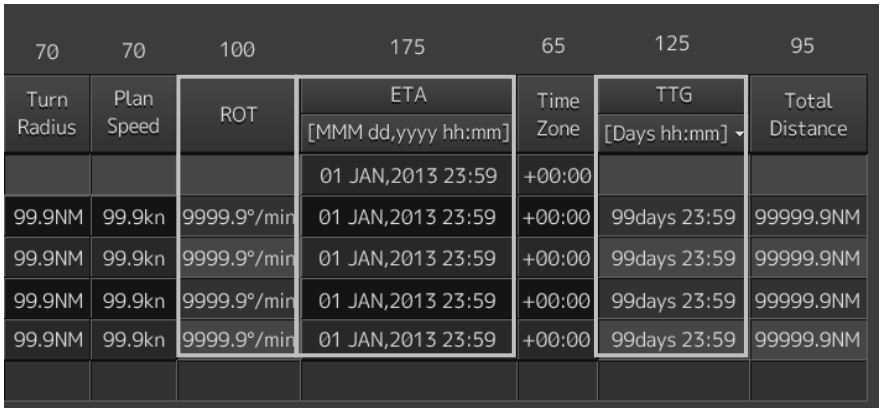
Checking an error target on the route

When an error is detected, the WPT of the error target and the leg are highlighted as follows.



9.10 Navigation Calculation Function

This section describes the function that supports the distance and bearing calculation that are required for navigation.



70	70	100	175	65	125	95
Turn Radius	Plan Speed	ROT	ETA [MMM dd,yyyy hh:mm]	Time Zone	TTG [Days hh:mm]	Total Distance
			01 JAN,2013 23:59	+00:00		
99.9NM	99.9kn	9999.9°/min	01 JAN,2013 23:59	+00:00	99days 23:59	99999.9NM
99.9NM	99.9kn	9999.9°/min	01 JAN,2013 23:59	+00:00	99days 23:59	99999.9NM
99.9NM	99.9kn	9999.9°/min	01 JAN,2013 23:59	+00:00	99days 23:59	99999.9NM
99.9NM	99.9kn	9999.9°/min	01 JAN,2013 23:59	+00:00	99days 23:59	99999.9NM

9.10.1 ROT (Rate of Turn)

ROT is automatically calculated from the planned ship's speed and the turn radius and displayed on [ROT].

9.10.2 ETA (Estimated Time of Arrival)

ETA is automatically calculated from the WPT position, planned ship's speed, and time zone and is displayed on [ETA].

9.10.3 TTG (Time to Go)

TTG is automatically calculated from the WPT position and planned ship's speed and displayed on [TTG].
A display format can be selected from the list that is displayed by clicking on the TTG title.

[Days hh:mm]

01Days 23:59

[hhhh:mm]

9999:59

9.11 Importing/Exporting a Route File

By using the "Import" or "Export" dialog box, the route file that was created can be imported/exported. The dialog box can be displayed as follows.

1 Click on the Route Planning menu button.

2 Select [Import] or [Export] from the list that is displayed.

The "Import" or "Export" dialog box appears.

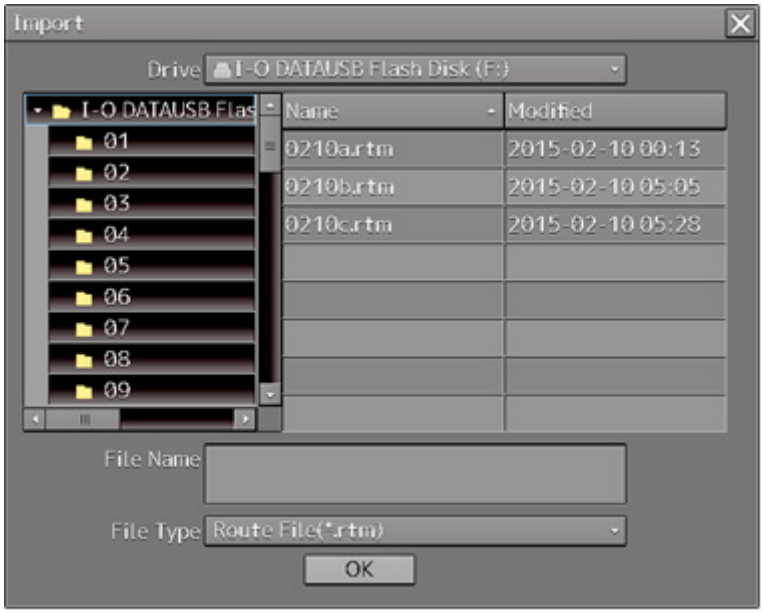
9.11.1 Importing a route file

1 Specify the "Drive", the "Folder", the "File name", and the "File Type" that stores the file to be imported.

2 Click on the [OK] button.

The route file that is selected can be imported.

Press the [X] button to cancel the importing of a file.



Note

The file type of the file to be imported can be selected in the [File Type] combo box.The file types that can be imported are as follows.

.rtn: Displays a route file (normal).

This file is used for ECDIS (JAN-701B/901B) and Chart Radar (JMA-900B)

.rta: Displays a route file (TCS route).

This file is used for ECDIS (JAN-701B/901B) and Chart Radar (JMA-900B)

.rtm: Displays a route file used in this equipment.

.csv: Displayes a route file in CSV format.

*(Wildcard): Displays all the files that can be imported.

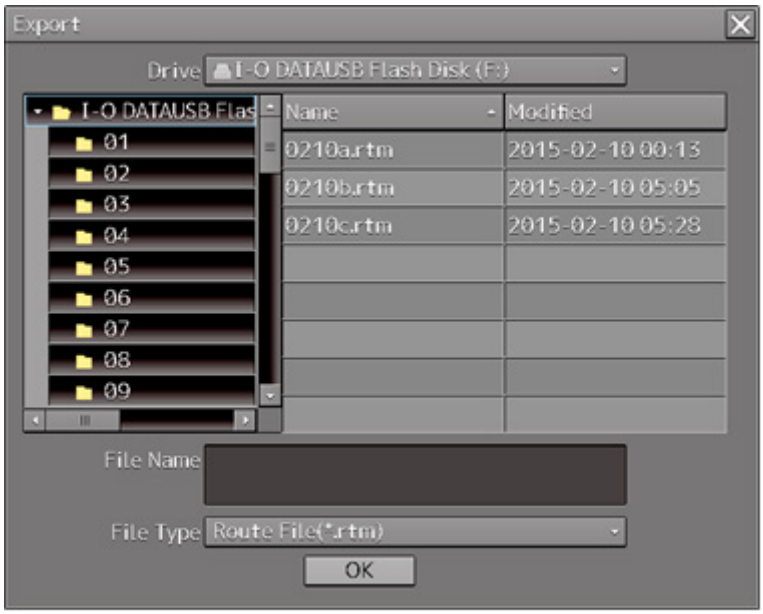
9.11.2 Exporting a route file

1 Specify the "Drive", the "Folder", the "File name", and the "File Type" that stores the file to be exported.

2 Click on the [OK] button.

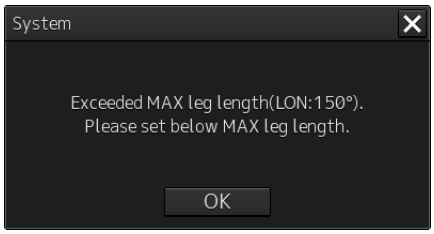
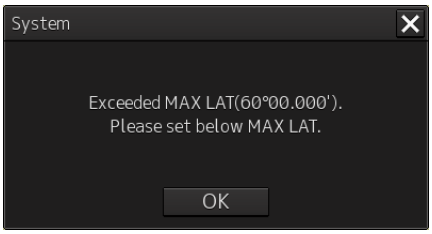
The route file that is currently opened is exported.

Press the [X] button to cancel the exporting of a file.



9.12 Error Messages that are Displayed when a Route is Created

When a route is created, the following error messages may be displayed, disabling execution of the specified operation.

Error message	Status
	The total number of WPTs exceeded the upper limit (511).
	The leg length exceeded the maximum value (longitude 150°).
	The latitude exceeded the latitude upper limit.

Section 10 Route Monitoring

10.1 Route Monitoring

The route monitoring function enables monitoring of the position of own ship, heading, and ship speed, and calculation of an expected time of arrival using the route created in route planning.

Memo

For moitoring a route, it is necessary to create a route file or copy a route file in route planning in advance.

For the details of route planning, refer to "Section 9 Route Planning".

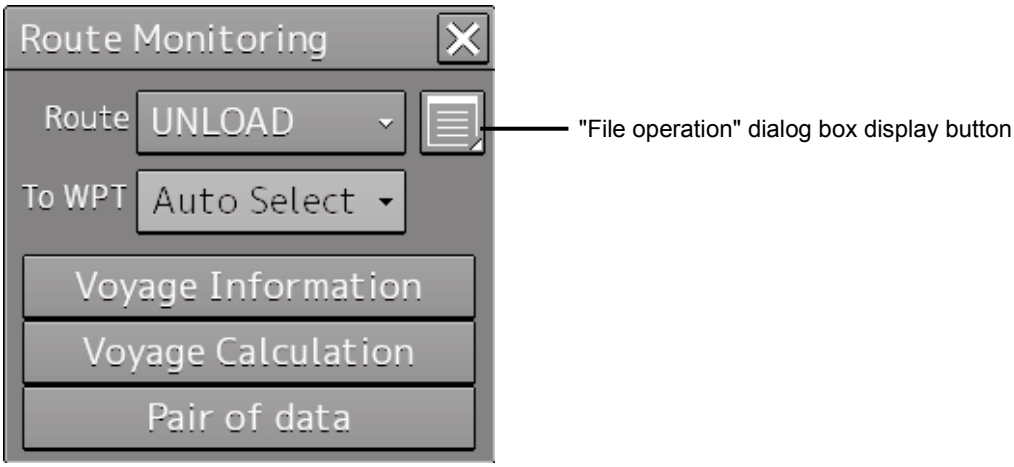
10.1.1 Starting route monitoring

1 Click on the [Menu] button on the left toolbar.

The menu is displayed.

2 Click on the [Route Monitoring] button on the menu.

The "Route Monitoring" dialog box appears.



3 Select a required route file.

[Selecting from the [Route] combo box]

1) Click on the [Route] combo box.

2) Select a required route.

[Selecting from a route file list]

1) Click on the "File operation" dialog box display button.

2) Select a required file from the list of the "File operation" dialog box.

About the "File operation" dialog box, refer to "10.2 Selecting and Deleting Route Files"

3) Click on the [Open] button.

4 **Select a WPT to which the ship is to travel. A WPT can be selected automatically or manually.**

[Automatic selection]

The nearest WPT from the own ship's position is selected automatically.

1) Open the next WPT list by clicking on the [To WPT] combo box.

2) Select [AUTO Select].

[Manual selection]

Select a WPT manually.

1) Open the next WPT list by clicking on the [To WPT] combo box.

2) Click on a required WPT.

Memo

When route sharing with GPS is enabled, [Active Route] is displayed on [Route] combo box. To start route monitoring by using the route that has been created by GPS, select [Active Route].

10.1.2 Ending route monitoring

1 **Click on the [Menu] button on the left toolbar.**

The menu is displayed.

2 **Click on the [Route Monitoring] button on the menu.**

The "Route Monitoring" dialog box appears.

3 **Click on the [Route] combo box.**

4 **Click on [UNLOAD].**

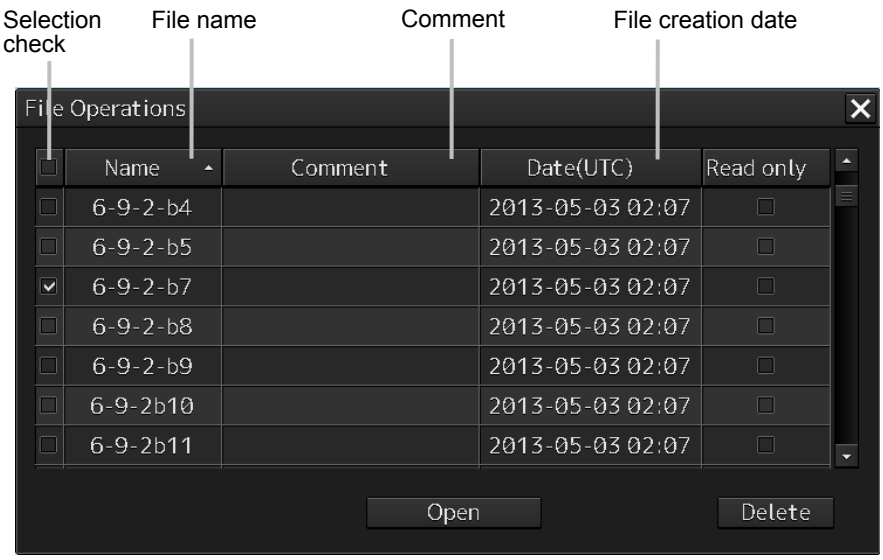
10.2 Selecting and Deleting Route Files

Selection of the route to be displayed and deletion of obsolete route files are enabled on the "File operation" dialog box.
Use the following procedure to open the "File Operation" dialog box.

1 Click on the [Menu] button on the left toolbar.
The menu is displayed.

2 Click on the [Route Monitoring] button on the menu.
The "Route Monitoring" dialog box appears.

3 Click on the [File operation] dialog box display button.
The "File Operation" dialog box appears.



10.2.1 Selecting a route to be displayed

1 Select the selection check box of the route file to be displayed.
When [Name] is clicked on, ▼ is displayed. Whenever ▼ is clicked on, the file display sequence changes to the ascending/descending sequence based on the names.

2 Click on the [Open] button.

10.2.2 Deleting a route file

1 Click the selection check of the route file to be deleted.

2 Click on the [Delete] button.

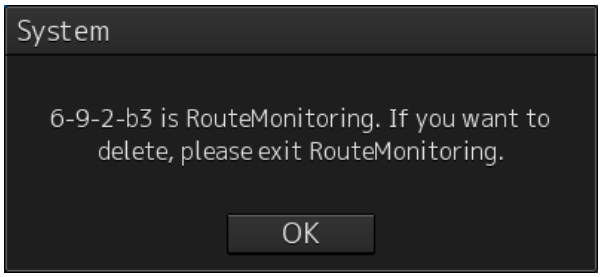
A message dialog box is displayed as to whether the deletion is to be executed.

3 When executing deletion, click on the [Yes] button. To cancel deletion, click on the [No] button.

Note

The file of the route that is currently monitored or the route that is used for automatic sailing cannot be deleted.

The following message dialog box appears.



Close the dialog box by clicking on the [OK] button.

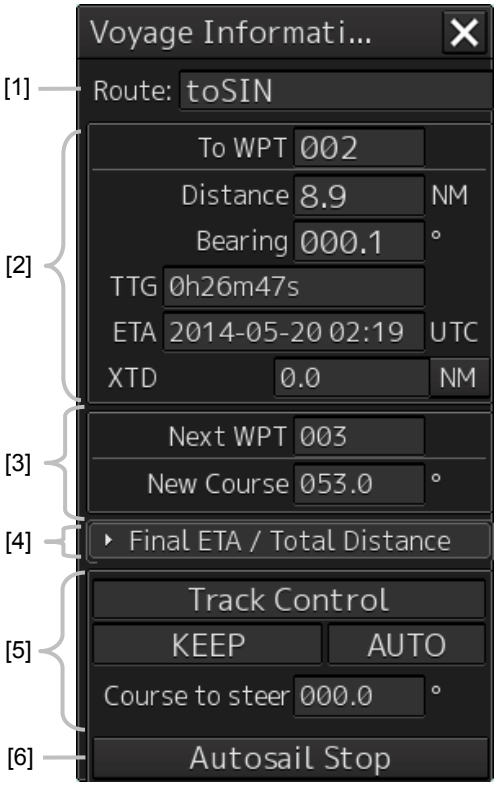
10.3 Voyage Information (Voyage Monitoring Information) Dialog Box

The "Voyage Information" (voyage monitoring information) dialog box is used to monitor voyage statuses.
In addition to voyage monitoring, execution of course change and termination of automatic navigation can also be performed.
Use the following procedure to open the "Voyage Information" dialog box.

1 Click on the [Menu] button on the left toolbar.
The menu is displayed.

2 Click on the [Route Monitoring] button on the menu.
The "Route Monitoring" dialog box appears.

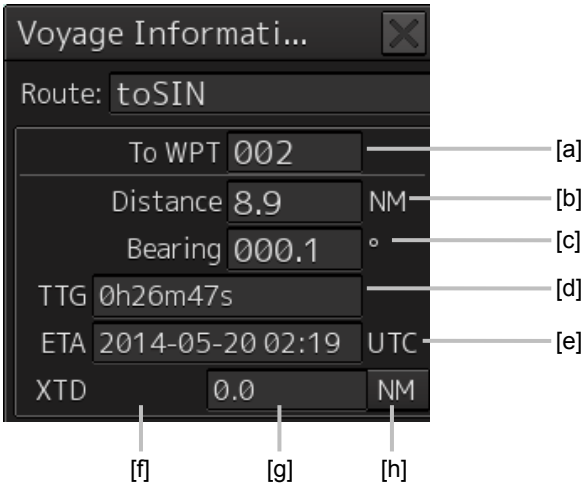
3 Click on the [Voyage Information] button.
The "Voyage Information" dialog box appears.



[1] Route name display
A file name of the route that is being monitored is displayed.

[2] To WPT information

The To WPT information that was selected in the “Route Monitoring” dialog box is displayed.



[a] [To WPT] (To WPT number)

Displays a To WPT number.

[b] [Distance] (Own ship - To WPT distance)

Displays a distance between the position of the own ship and the position indicated by To WPT.

[c] [Bearing] (Own ship - To WPT angle)

Displays an angle of the own ship and the position indicated by To WPT.

[d] [TTG] (Expected traveling time)

Displays an expected traveling time to reach the position indicated by To WPT.

[e] [ETA] (Expected time of arrival)

Displays the expected time of arrival at the position indicated by To WPT.

[f] Cross track direction

Displays a cross track direction of the own ship.

When the own ship is cross-tracked on the right side, [STBD] is displayed and when the own ship is cross-tracked on the left side, [PORT] is displayed.

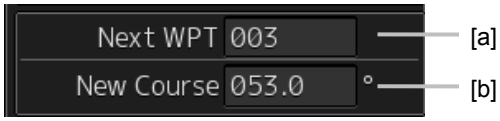
[g] Cross track distance

Displays a cross track distance of the own ship.

[h] Cross track distance unit switching button

Switches the display unit of a cross track distance. Whenever the button is clicked on, the unit is switched to "m" or "NM".

[3] Next WPT information



[a] [Next WPT] (Next WPT number)

Displays a Next WPT number.

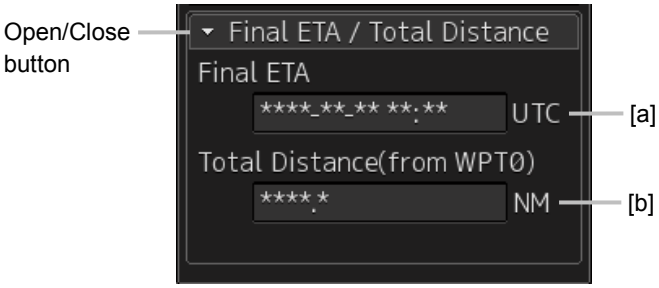
[b] [New Course] (Leg bearing of Next WPT)

Displays a leg bearing of the Next WPT.

[4] [Final ETA/Total Distance] (Expected time of arrival at final WPT/total distance)

This section displays the expected time of arrival at the final WPT based on the calculation from the current speed and the distance from WPT0 (departure point) to the position of the own ship.

The expected time of arrival at the final WPT and the total distance can be displayed or hidden by clicking on the Open/Close button.



[a] [Final ETA]

Displays ETA up to the last WPT that was calculated based on the current ship's speed.

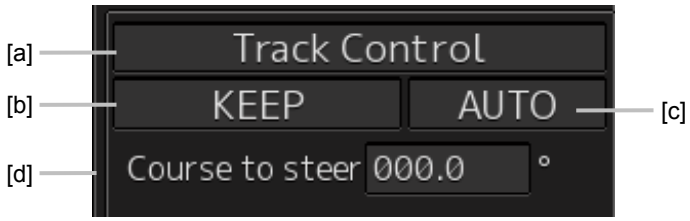
[b] [Total Distance (from WPT0)] (Total distance)

Displays a total distance from WPT0 to the own ship.

[5] Automatic sailing information

This section displays the status of Auto Pilot that is installed.

> **Note**
> If the Auto Pilot device is not installed, information is not displayed.



[a] Automatic sailing status

Displays an automatic sailing status.

Display	Status
No display	A/P (Auto Pilot) non-connection setting or automatic sailing alert is occurring
Track Control	The A/P steering mode is set to Track Control.
Heading Control	The A/P steering mode is set to Heading Control.
Manual	The A/P steering mode is set to Manual.

[b] Control mode

Displays a control mode of automatic sailing.

Display	Status
No display	Automatic sailing inactive
KEEP	Automatic sailing/maintaining the course
TURN	Automatic sailing/turning (TCS category C)
Assisted Turn	Automatic sailing/turning (TCS category B)

[c] Turning mode

Displays a turning mode of automatic sailing.

Display	Status
No display	Automatic sailing inactive
AUTO	Automatic turning mode

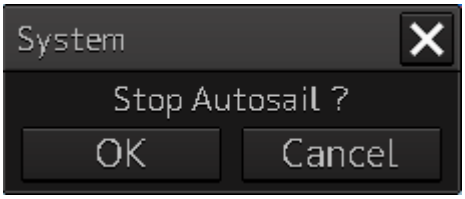
[d] Set heading

Displays the set heading to be transmitted to Auto Pilot.

[6] [Auto Sail Stop] button

Click on this button to terminate automatic sailing.

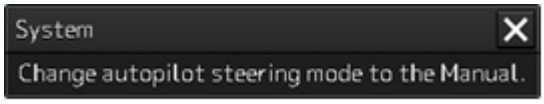
The following message dialog box appears.



When the [OK] button is clicked on, automatic sailing terminates.

Memo

When a message dialog box indicating the switching of the Auto Pilot mode to the Manual mode is displayed, switch the Auto Pilot steering mode to the Manual mode.



10.4 Voyage Calculation Dialog Box

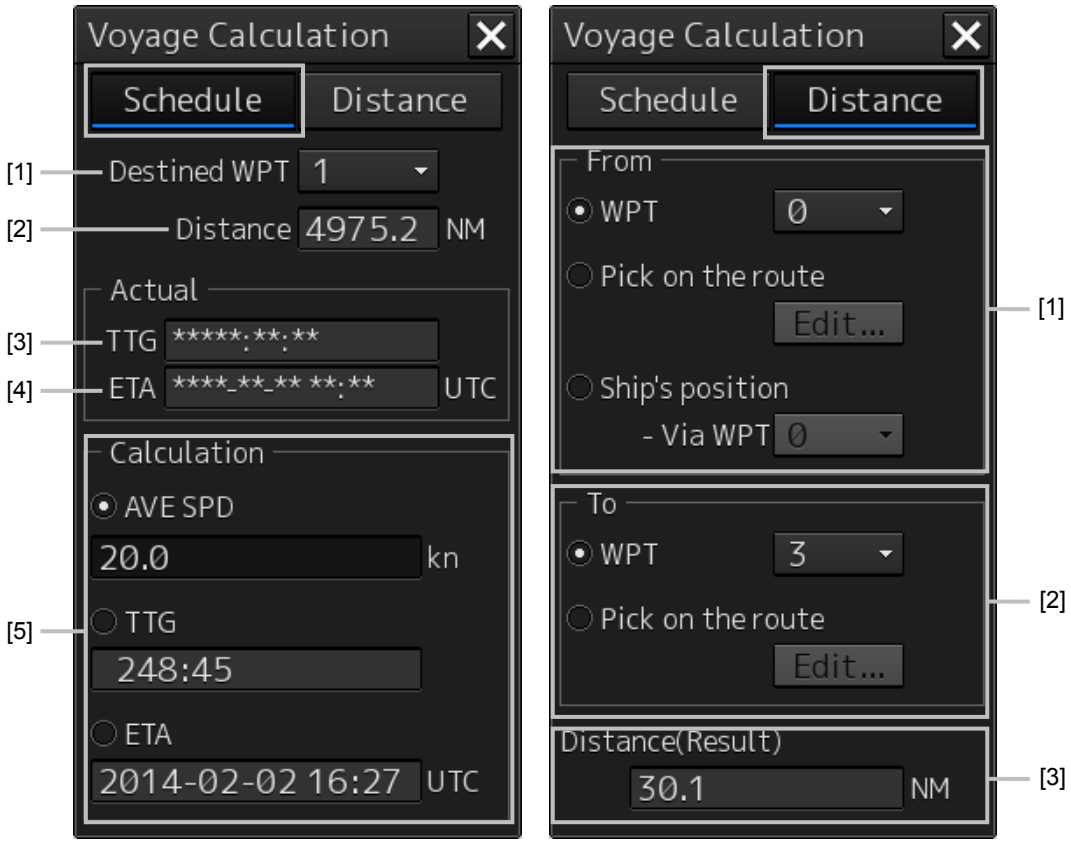
The "Voyage calculation" dialog box is used to calculate the expected WPT arrival time, the time required, and required ship speed

It is also possible to calculate a distance between two points such as between WPTs, from the own ship's position to WPT, or any position on the route to WPT.

Use the following procedure to open the "Voyage calculation" dialog box.

1. **Click on the [Menu] button on the left toolbar.**
   The menu is displayed.
2. **Click on the [Route Monitoring] button on the menu.**
   The "Route Monitoring" dialog box appears.
3. **Click on the [Voyage calculation] button.**
   The "Voyage calculation" dialog box appears.

When the [Schedule] (schedule calculation) button is clicked on, a schedule calculation dialog is displayed.
When the [Distance] (distance calculation) button is clicked on, a distance calculation dialog is displayed.



"Schedule" Dialog "Distance" Dialog

"Schedule" Dialog

[1] [Destined WPT] combo box

Select a destined WPT.

[2] [Distance] (Distance up to the destined WPT)

Displays a distance from the own ship's position to the selected WPT.

[3] [TTG] (Expected traveling time)

Displays a traveling time required based on the position from the current SOG value to the destined WPT.

[4] [ETA] (Expeced time of arrival)

Displays a time at arrival of the destined WPT from the current SOG value.

[5] [Calculation] (Calculation)

Selects a calculation method and enters the values.

"Distance" Dialog

[1] [From]

Selects a starting point calculation method and enters the values.

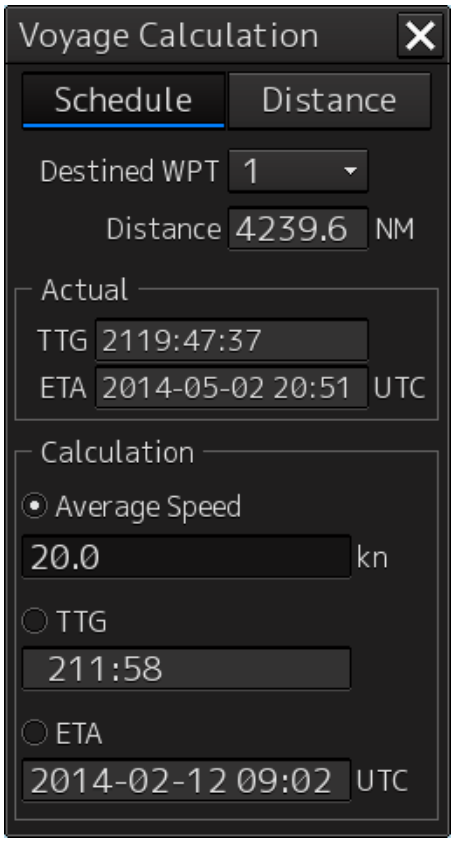
[2] [To]

Selects an ending point calculation method and enters the values.

[3] [Distance (Result)] (Distance calculation result)

Displays distance from the starting point and ending point that were obtained from the setting.

10.4.1 Calculating a schedule



1 **Click on the [Schedule] button.**

2 **Click on the [Destined WPT] combo box.**

3 **Click on the WPT number whose schedule is to be calculated.**

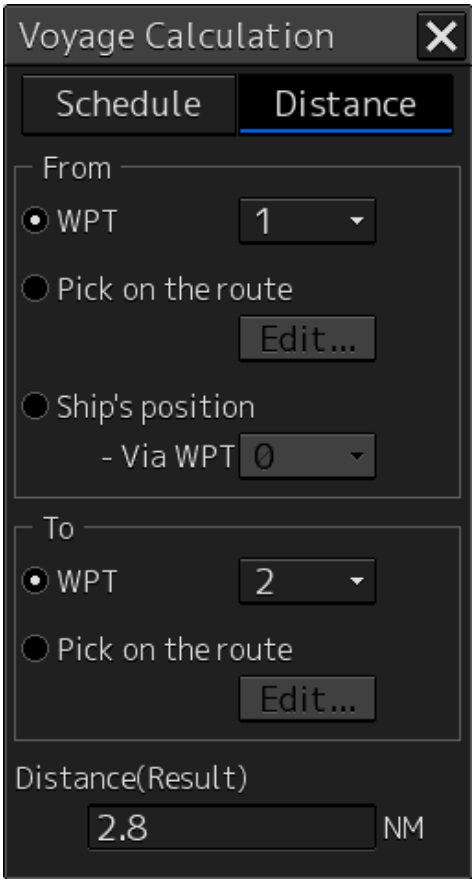
The measured distance from the own ship to the selected WPT, the estimated required time calculated based on the SOG (Speed Over the Ground), and the estimated time of arrival are displayed.

4 **Select a calculation method and enter a value.**

When [Average Speed] (calculated ship's speed), [TTG] (calculated traveling time), or [ETA] (calculated time of arrival) is selected and a value is entered, the calculation result of the ship's speed, expected traveling time, and expected time of arrival are displayed. These three items are displayed by linking.

[Average Speed]: Enter a ship's speed.
[TTG]: Enter a calculated traveling time.
[ETA]: Enter a calculated time of arrival by using a calendar/time picker.

10.4.2 Calculating a distance



1 **Click on the [Distance] button.**

2 Select starting point calculation method and enter a value.

Set a starting point for distance calculation by selecting [WPT] (selection of starting WPT), [Pick on the route] (selecting any position on the starting route), or [Ship's position] (selection of the own ship's position).

[WPT]: Click on a WPT used as the starting point from the combo box.

[Pick on the route]: Any position on the routes set in the starting WPT and the end WPT is used as the starting point.
When the [Edit] (editing any position) button is clicked, the color of the selectable route changes to green. When any position is clicked, that position becomes the starting point.

[Ship's position]: The own ship's position is used as the starting point.
Click on the WPT to be passed through from the [Via WPT] combo box.

3 Select an ending point calculation method and enter a value.

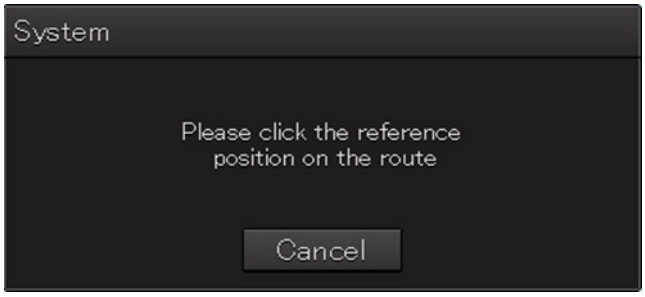
Set an ending point for distance calculation by selecting [WPT] (selection of ending WPT) or [Pick on the route] (selecting any position on the ending route).

[WPT]: Click on a WPT used as the ending point from the combo box.

[Pick on the route]: Any position on the routes set in the starting WPT and the end WPT is used as the end point.
When the [Edit] (editing any position) button is clicked, the color of the selectable route changes to green. When any position is clicked, that position becomes the end point.

Memo

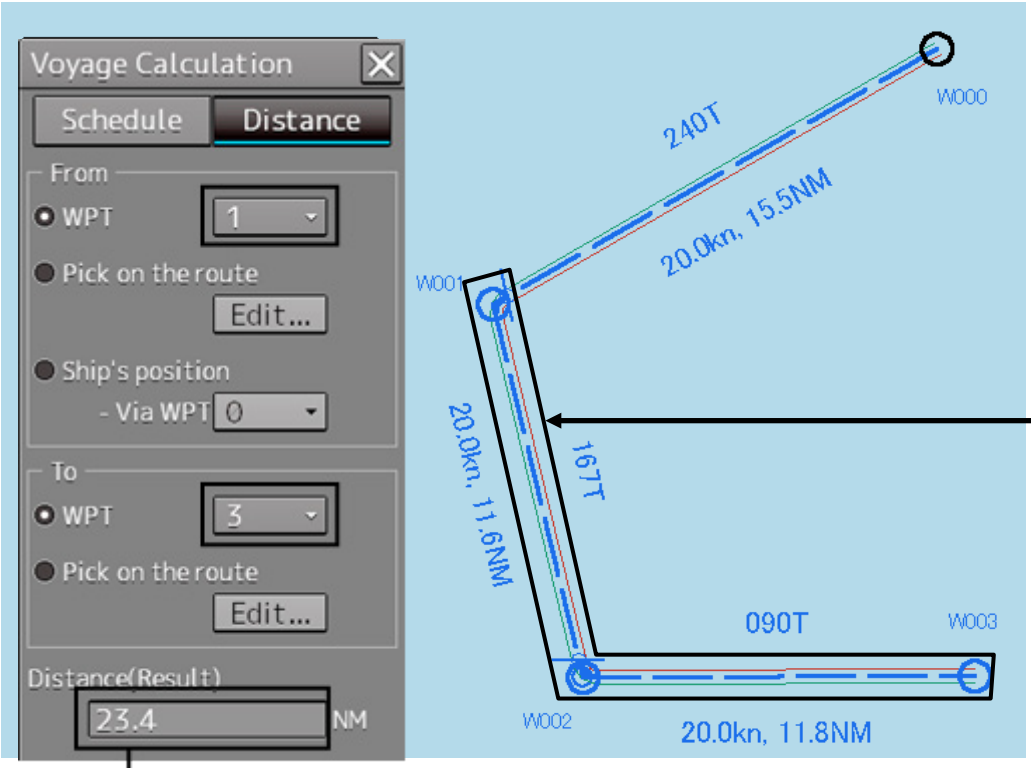
When the [Edit] button is clicked on, the following message dialog box appears.



Position selection can be cancelled by clicking on the [Cancel] button.

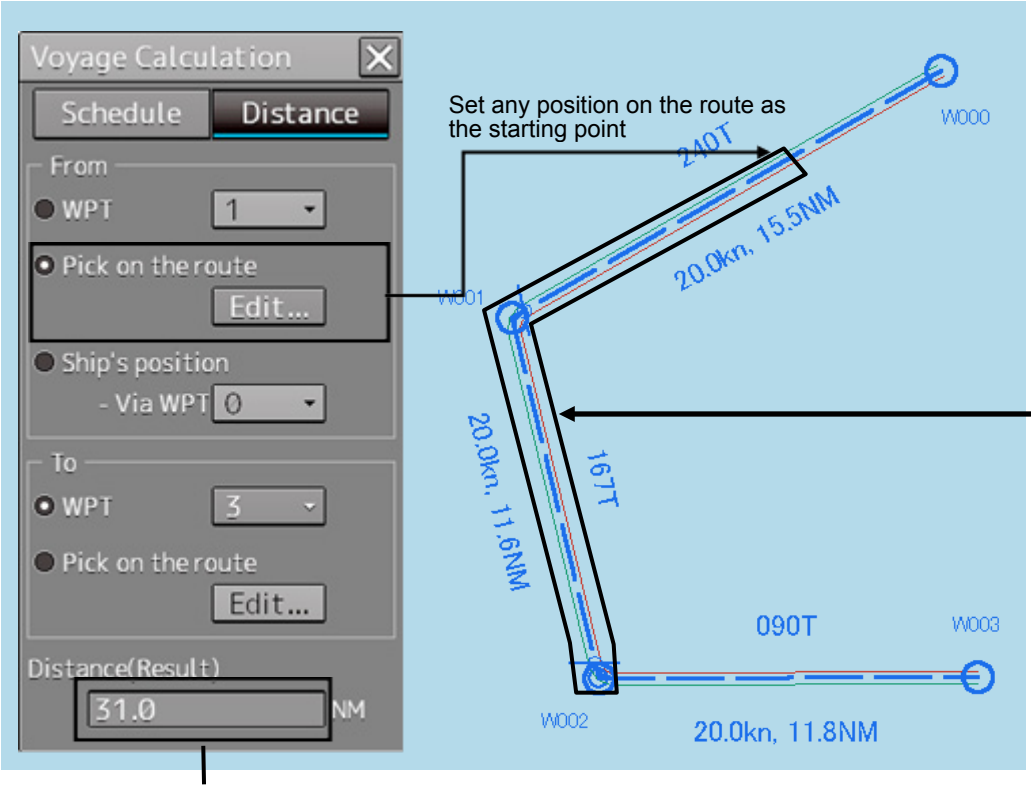
10.4.3 Example of distance calculation

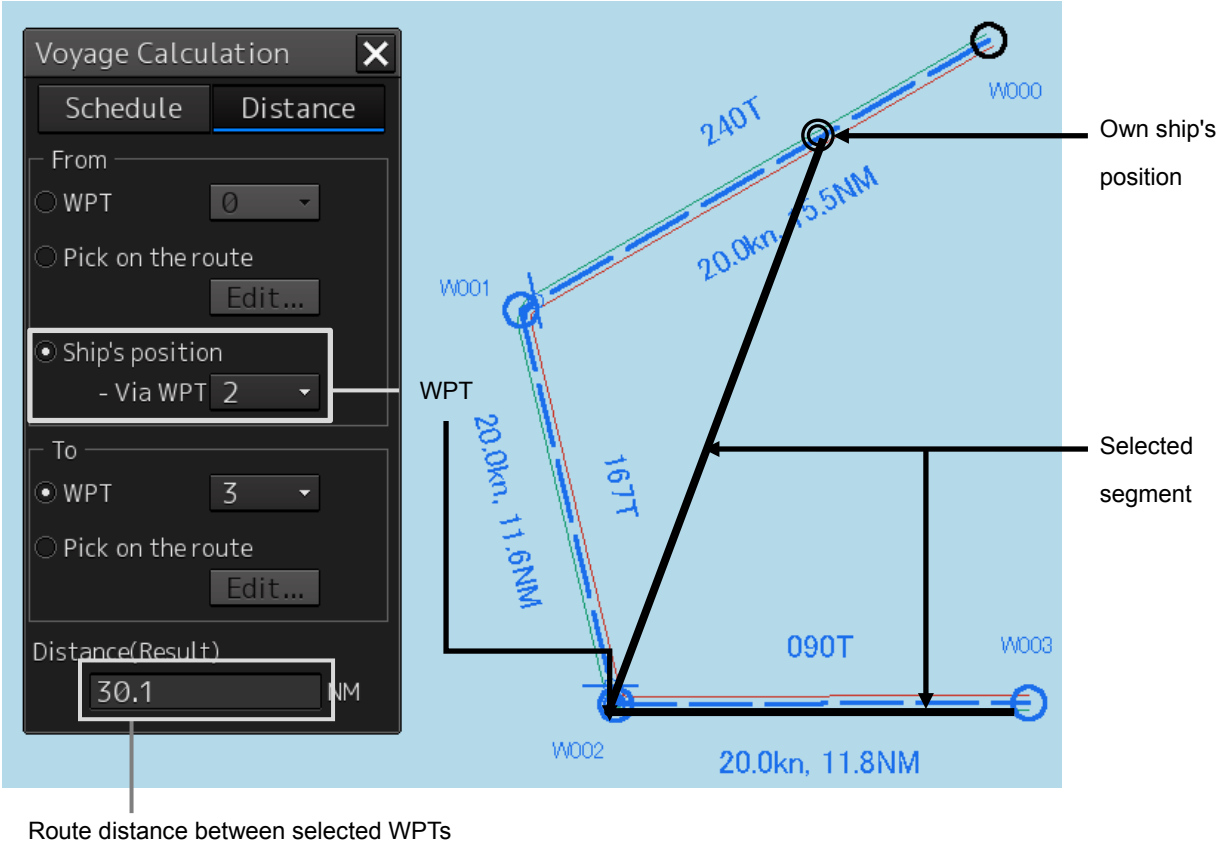
Calculating with [WPT]



Route distance between selected WPTs

Selecting [Pick on the route] (Selecting any starting point on the route) as the starting point:



Route distance between selected WPTs

Selecting [Ship's position] (Selecting the own ship's starting position):