Section 17 Setting up Alerts

By setting this equipment to generate an alert when the own ship's position or the condition meets the specific condition or any other ship or obstacle approaches to a specific range, preliminary measures can be taken, avoiding collisions, grounding, and deviation from the route can be avoided.
This section explains the method of setting conditions (threshold values) for generating alerts, alert processing operations, and alert timer setting using the [Alert] menu.

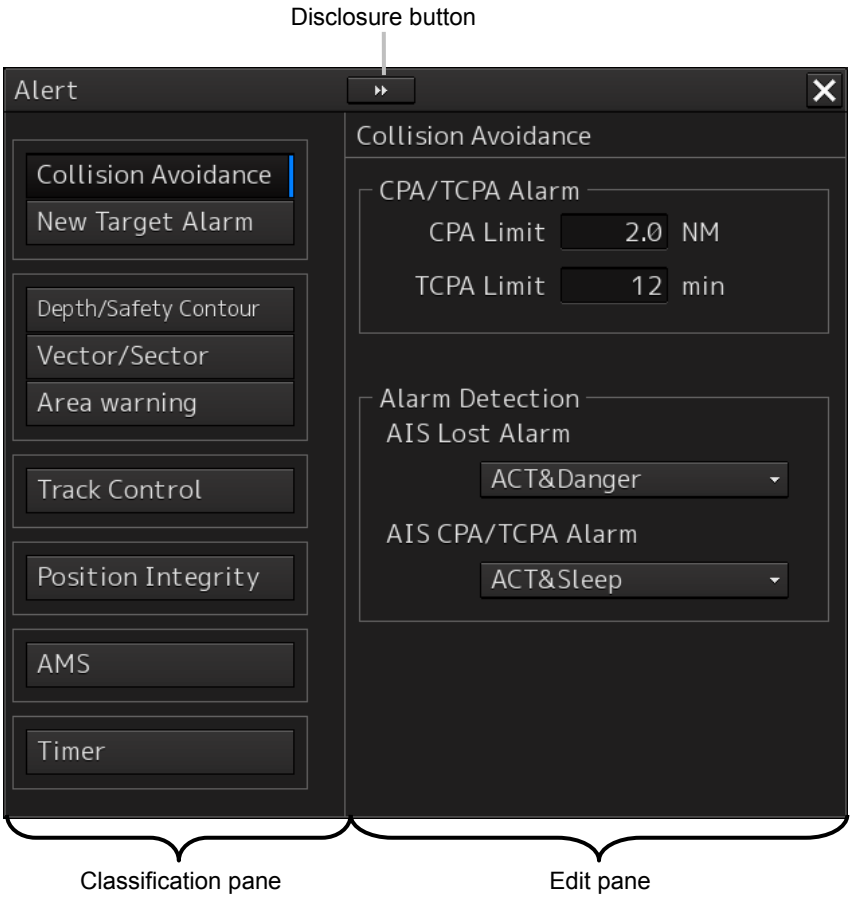
17.1 Selecting Setting Items

When the [Alert] menu is opened, the "Alert" dialog box appears.
By selecting a setting item in the "Alert" dialog box, the setting dialog of the selected item can be displayed.

17.1.1 Displaying the "Alert" dialog box

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

2 Click on the [Alert] button on the menu.
The [Alert] dialog box appears.



The [Alert] dialog box consists of the classification pane and the edit pane.
By clicking the Disclosure button ( ), you can hide the classification pane. To show the classification pane again, click the Disclosure button ( ).

17.1.2 Selecting a setting item

1 Click the alert classification you want to set up in the classification pane.
The setting dialog of the selected item is displayed in the edit pane.

2 Set up in the edit pane.

The following items can be set in the "Alert" dialog box.

Setting item	Setting contents	Function restriction
Collision Avoidance	Set the following conditions to generate a collision avoidance alert. • CPA/TCPA limit value • Status of the AIS target to be targeted for a lost alarm Refer to "17.2 Collision Avoidance Alert Generation Conditions".	
New Target Alarm	Set the following conditions to generate an automatic acquisition target alarm. • Area (AZ) for TT target automatic acquisition • Enable/disable AZ Refer to "17.3 New Target Alarm Generation Conditions".	
Depth/Safety Contour	Set the following conditions to generate a grounding avoidance alert. • Below keel water depth alarm • Safety contour line approach alarm Refer to "17.4 Depth/Safety Contour Alert Generation Conditions".	Only the "Below keel water depth alarm" can be set on the RADAR screen. The "Safety contour line approach alarm" can also be set on the ECDIS screen and the chart radar screen (when the chart option is set for the radar as chart display option).
Vector/Sector (Danger detection vector/sector)	Set a danger detection vector/sector. Refer to "17.5 Setting Up Vector/Sector".	ECDIS screen and chart radar screen (when the chart option is set for the radar as chart display option)

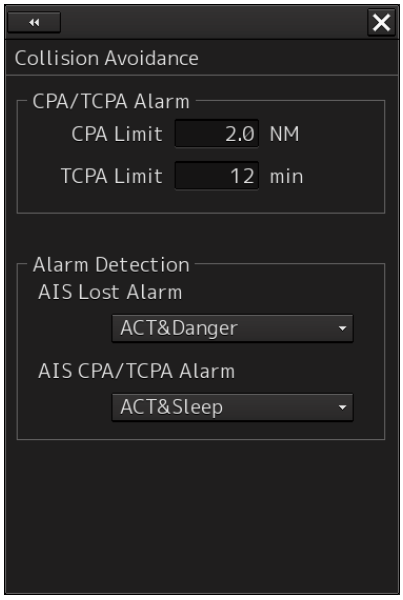
Setting item	Setting contents	Function restriction
Area warning	Set the conditions for generating a warning by detecting a danger detection vector. Refer to "17.6 Area Warning Generation Conditions".	ECDIS screen and chart radar screen (when the chart option is set for the radar as chart display option)
Track Control	Set the conditions for generating an automatic route retention alert. Refer to "17.7 Track Control Alert Generation Conditions".	
Position Integrity (Position sensor integrity)	Set the conditions for generating a position monitor warning and a HDOP limit caution. Refer to "17.8 Position Integrity Alert Generation Conditions".	
AMS (Alert Management System)	Set the actions to be taken at the next stage for an unacknowledged alert. Refer to "17.9 Setting up Alert Processing".	
Timer	Set a time for generating the alert. Refer to "17.10 Setting Up the Alert Timer".	

17.2 Collision Avoidance Alert Generation Conditions

When you select [Collision Avoidance] in the classification pane, the [Collision Avoidance] dialog is displayed in the edit pane.
In this dialog, the collision detection condition (CPA/TCPA limit) and the AIS target status, which is the target of alert detection, can be set.
For the details of CPA/TCPA, refer to "6.2 Collision Avoidance (Explanation)".

Note

As for the values of collision detection conditions, please specify the optimal values according to the ship type, sea area, weather and marine conditions. (For the condition and type of each alert, refer to "6.7 Alert Display".)



17.2.1 Setting the CPA/TCPA limit values

1 **Enter the value of [CPA Limit] in a range from 0.1 NM to 9.9 NM.**

2 **Enter the value of [TCPA Limit] in a range from 1 min to 99 min.**

17.2.2 Setting the status of the AIS target that is targeted for lost warning

1 Select a target for detecting a lost warning of the AIS target from the [AIS Lost Alarm] combo box.

ACT&Danger&Select: Activated AIS targets, danger targets and numeric value display targets are included.
Danger: Danger targets are included.
Off: Lost warnings are not generated.

> **Note**
> Lost warnings for sleeping AIS targets will not be generated.

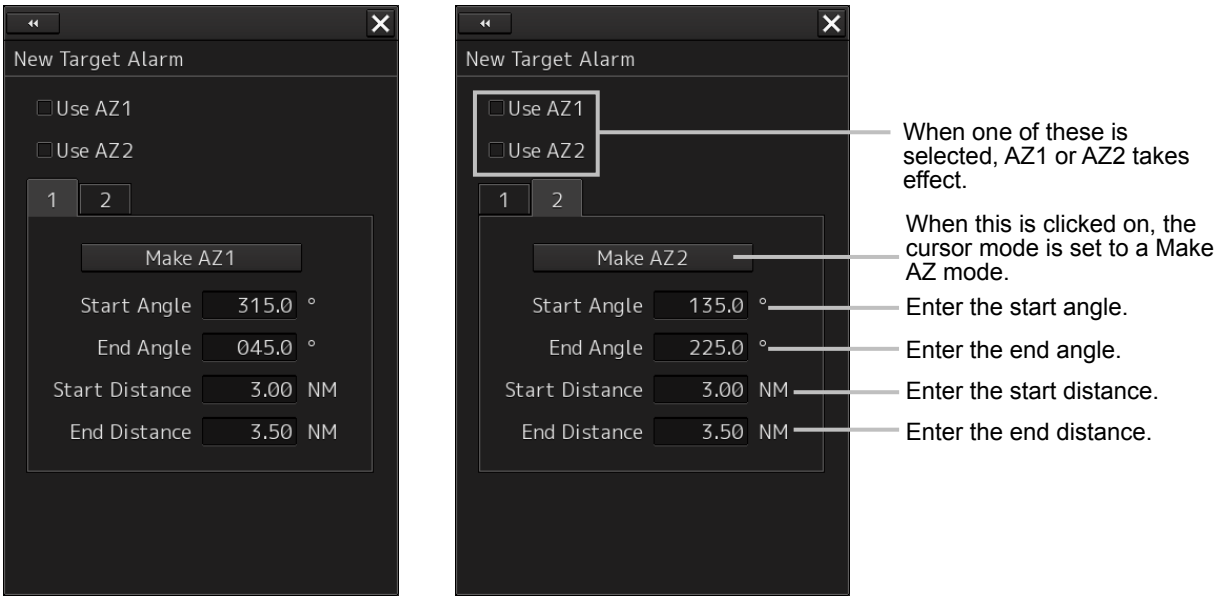
> **Memo**
> If Off is being set, the following message is displayed in the alert status area.
> AIS Lost Alarm is Disabled

2 Select a target for detecting a CPA/TCPA alarm of the AIS target from the [AIS CPA/TCPA Alarm] combo list.

ACT & Sleep: Activated AIS targets and sleeping AIS targets are included.
ACT: Activated AIS targets are included.
Off: CPA/TCPA alarms are not generated.

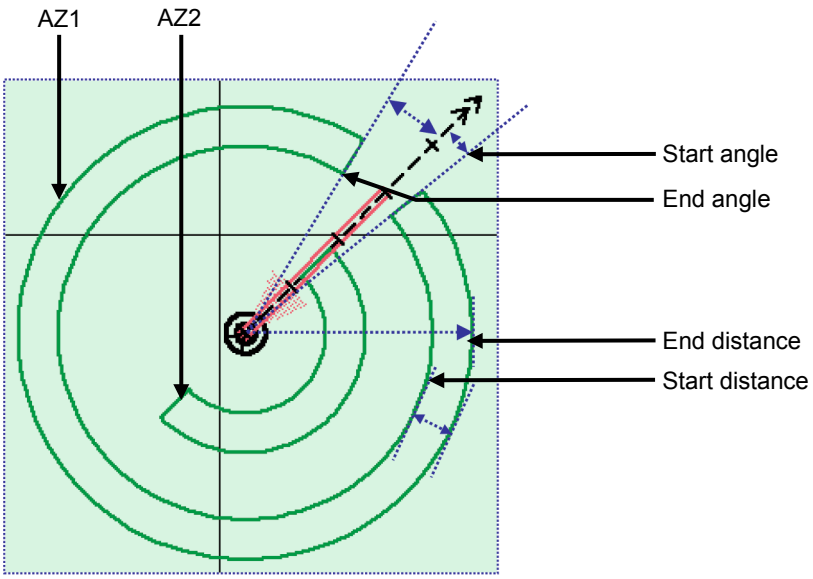
17.3 New Target Alarm Generation Conditions

When you select [New Target Alarm] in the classification pane, the [New Target Alarm] dialog is displayed in the edit pane.
In this dialog, it is possible to set the AZ (automatic acquisition/activation zone) and switch the AZ to enable/disable.
For the details of the setting of the AZ, refer to "6.5.1.1 Automatic acquisition mode".



Settings of AZ1 (Automatic Acquisition/Activation Area 1)

Settings of AZ2 (Automatic Acquisition/Activation Area 2)



17.3.1 Switching AZ1/AZ2 to enable/disable

17.3.1.1 Enabling AZ1 or AZ2

Select the [Use AZ1] or [Use AZ2] check box.

A TT target / AIS target in the applicable AZ is automatically acquired / activated and it becomes a target of collision detection.

A " ◌ " mark and identification number are assigned to the acquired TT target on the radar screen, which are moved together with the TT target, and then a vector is displayed within 1 min.

17.3.1.2 Disabling AZ1 or AZ2

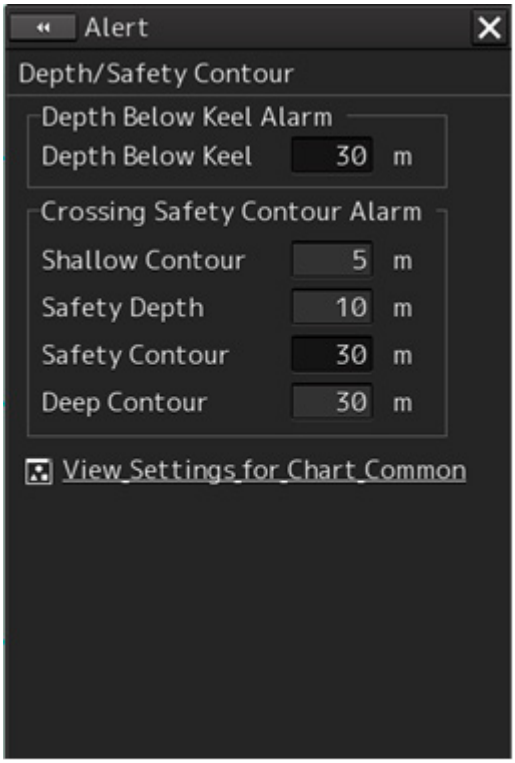
Clear the [Use AZ1] or [Use AZ2] check box.

Acquired and activated zones disappear from the RADAR screen. However, already acquired TT targets are continuously tracked. Moreover, activated AIS targets remain activated.

17.4 Depth/Safety Contour Alert Generation Conditions

When [Depth/Safety Contour] is selected in the classification pane, the "Depth/Safety Contour" dialog is displayed in the edit pane.
In this dialog, the threshold values for generating "Depth below keel alarm" and "Crossing safety contour alarm" can be set up.

Note
[Crossing safety contour alarm] cannot be displayed on the RADAR screen.



Each threshold value can be set in a range between 0 and 200 m.
In the [Shallow contour], [Safety depth] and [Deep contour] input boxes, the values set in [Options] - [Chart Common] of the View menu are displayed.
When [View Settings for Chart Common] is clicked, the "Chart Common" dialog box of the View menu appears.
For the details of each setting item, refer to "16.2.9 Setting up the display of Chart Common".

- Shallow Contour
- Safety Depth
- Safety Contour
- Deep Contour

Automatic compensation of entered values

The threshold values must satisfy the following conditions.

- Shallow Contour ≤ Safety Contour ≤ Deep Contour
- Shallow Contour ≤ Safety Depth ≤ Deep Contour

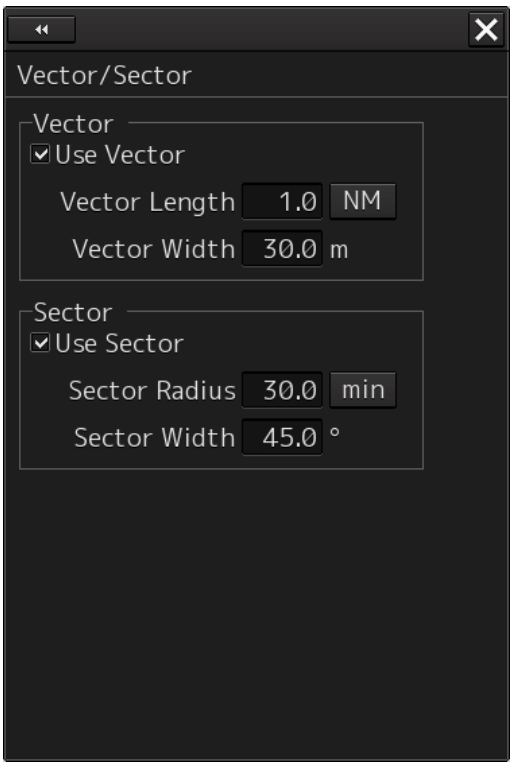
Safety Contour and Safety Depth are not related.

If there is any contradiction in the entered values, the following automatic compensations will be performed.

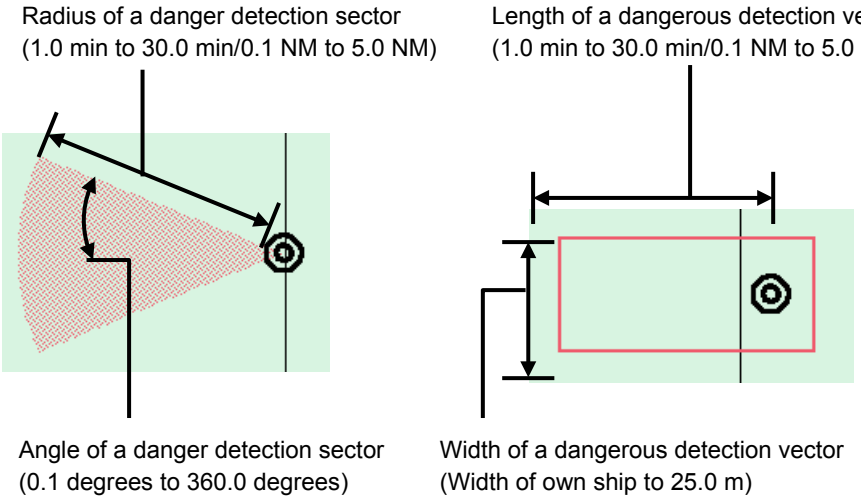
Condition	Compensation
Safety contour value (or Safety Depth value) < Shallow contour value	Replace the Shallow contour value with the Safety contour value (or Safety Depth value)
Deep contour value < Safety contour value (or Safety Depth value)	Replace the Deep contour value with the Safety contour value (or Safety Depth value)

17.5 Setting Up Vector/Sector

When [Vector/Sector] is selected in the classification pane, the "Vector/Sector" dialog is displayed in the edit pane.
In this dialog, the selection of the sizes of both a danger detection vector/sector and the switching to enable/disable of them are possible.



This unit can monitor when own ship tries to cross over the preset safety contour or danger area, or when dangerous objects enter the sector specified around own ship. For this monitoring, danger detection vectors and sectors can be displayed. As for danger detection vectors, detection ranges for crossover of safety contours and danger areas can be specified in units of minutes or nautical miles, and notches on vectors and tips of vectors indicate predicted positions if navigated at the current speed. Also, the radius of a sector can be set up in units of miles or minutes.



Dangerous Detection Vector and Sector

17.5.1 Switching to enable/disable a danger detection vector/sector

To enable a danger detection vector/sector, select [Use Vector] and/or [Use Sector] check box.
A danger detection vector and a danger detection sector appear on the chart.
To disable a danger detection vector/sector, clear [Use Vector] and/or [Use Sector] check box.
A danger detection vector and a danger detection sector disappear from the chart.

17.5.2 Setting up the size of a danger detection vector

1 **Enter a value in [Vector Length].**
Specify it in a range between 1.0 and 30.0 min or between 0.1 and 5.0 NM.
The unit of the vector length can be switched between min and NM by clicking on the Change Unit button,

2 **Enter a value in [Vector Width].**
Specify the vector width in a range between own ship's beam and 250.0 m.

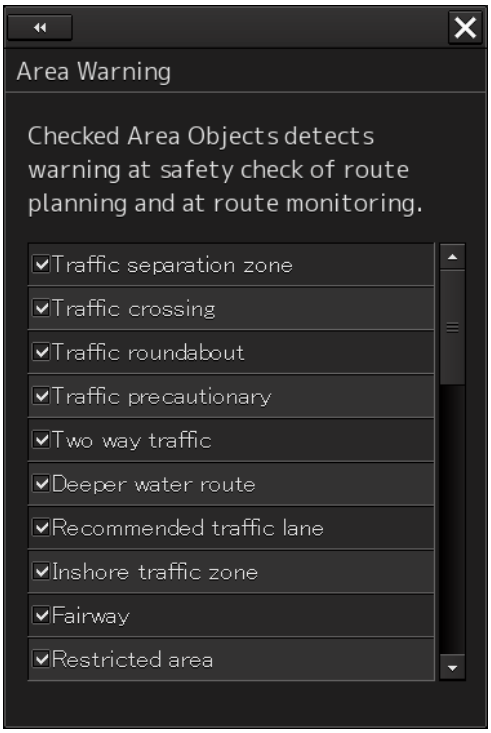
17.5.3 Setting up the size of a danger detection sector

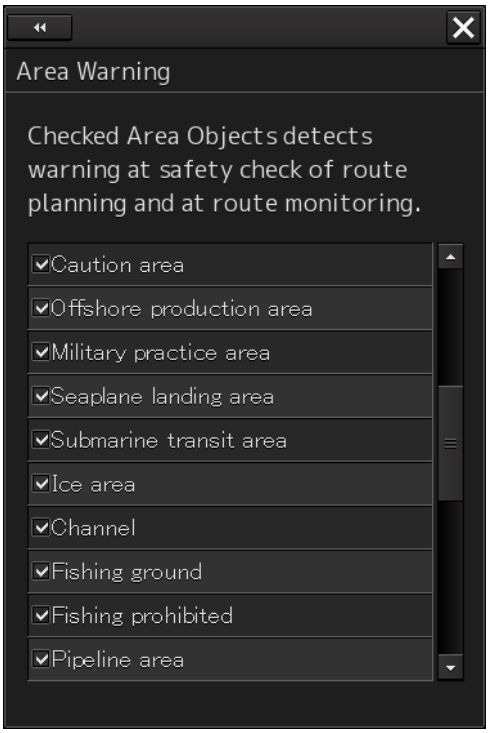
1 **Enter a value in [Sector Radius].**
Specify it in a range between 1 and 30 min or between 0.1 and 5.0 NM.
The unit of the sector radius can be switched between min and NM by clicking on the Change Unit button,

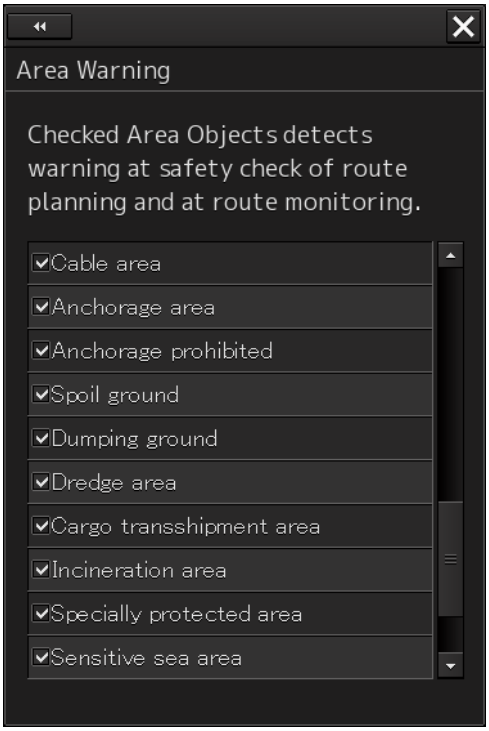
2 **Enter a value in [Sector Width].**
Specify the sector width in a range between 0.1 and 360.0°.

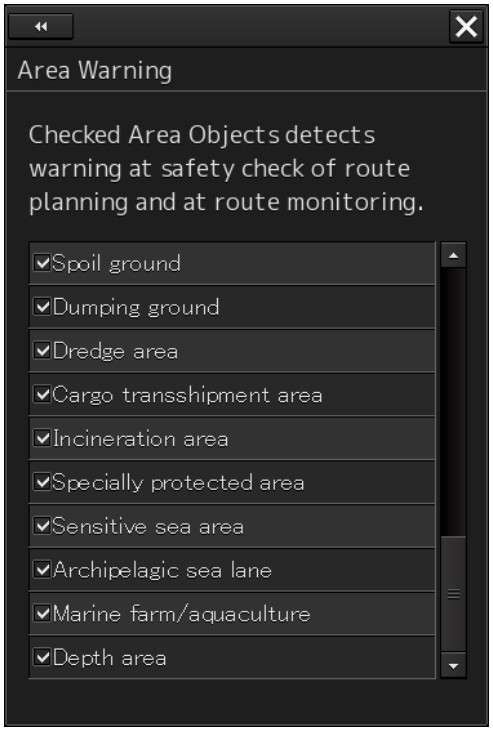
17.6 Area Warning Generation Conditions

When [Area Warning] is selected in the classification pane, the "Area Warning" dialog is displayed.
In this dialog, set an area for generating a warning when the symbol on the chart touches the danger detection vector.





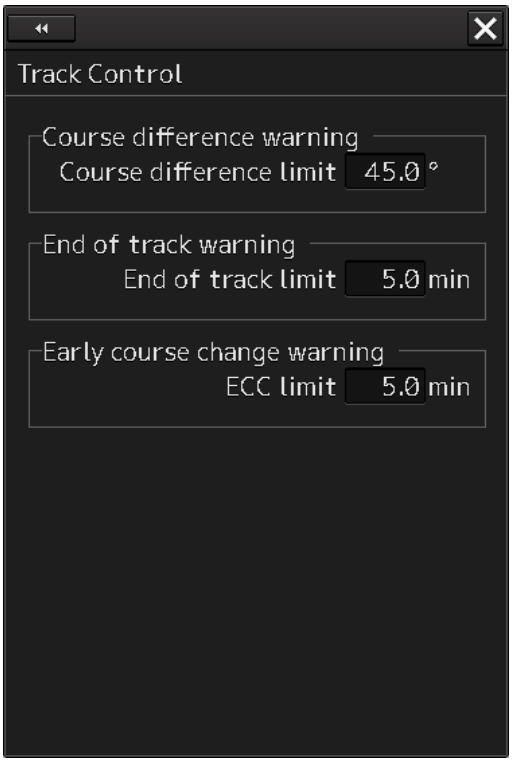




Select the check box of the area that is targeted for the alarm.
Clear the check box of the area not to be targeted for the alarm.

17.7 Track Control Alert Generation Conditions

When [Track Control] is selected in the classification pane, the "Track Control" dialog is displayed.
In this dialog, the conditions for generating warnings regarding Course Difference Limit, End of Track Limit, and ECC Limit can be set up.



Enter a threshold value for generating each warning.

Course difference limit:
Specify the difference between the planned course and own ship's bearing in angle, within a range between 0.5 and 45.0°.

End of track limit:
Specify the time remaining to reach the destination so as to generate a warning for approaching to the proximity of the final destination in a range between 1.0 and 5.0 min.

ECC limit:
Specify the time remaining to reach the wheel over point so as to generate an early course change warning in a range between 1.0 and 5.0 min.

17.8 Position Integrity Alert Generation Conditions

When [Position Integrity] is selected in the classification pane, the "Position Integrity" dialog is displayed.
In this dialog, the generation condition of the Position monitor warning and the HDOP limit can be set up.

17.8.1 Setting up the generation condition of the Position monitor warning

Enter the following threshold values for generating the position monitor warning.

Position Difference Limit:
The difference in distances when two GPS positions are compared at every second is used as a threshold value. Specify the difference in a range between 0.010 and 9.990 NM.

> **Note**
> Position Difference Limit takes effect when two GPSs are installed.

Radius Limit (GPS):
The radius of a monitoring circle having the predicted position of a GPS 1 sec later at the center is used as a threshold value. If the position actually measured is not within the time monitoring circle specified in [Time Limit], it will be subjected to an alert. Specify the radius limit in a range between 10 and 100 m.

Radius Limit (DGPS):
The radius of a monitoring circle having the predicted position of DGPS 1 sec later at the center is used as a threshold value. If the position actually measured is not within the time monitoring circle specified in [Time Limit], it will be subjected to an alert. Specify the radius limit in a range between 10 and 100 m.

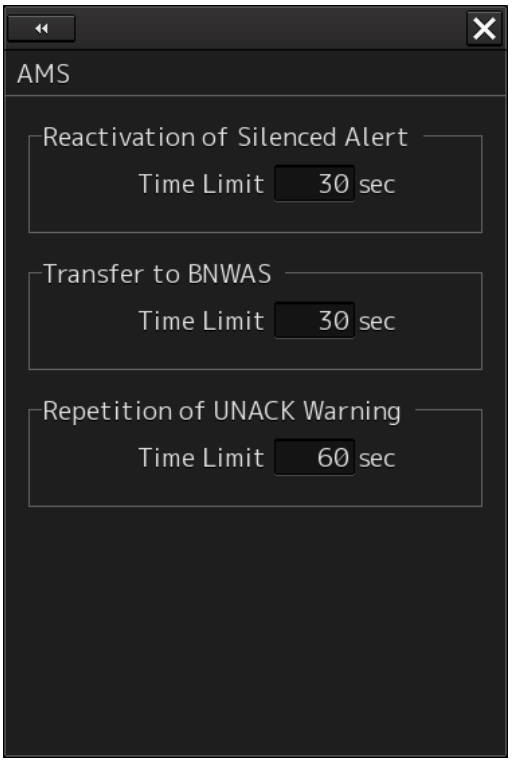
Time Limit:
The time during which the position actually measured by a GPS/DGPS deviates from the monitoring circle is used as a threshold value. The time limit can be specified in a range between 1 and 29s.

17.8.2 Setting up the HDOP exceeded caution generation condition

In the [HDOP Limit] combo box, select a threshold limit of HDOP (Horizontal Dilution of Precision). Select either one of [4], [10] and [20].

17.9 Setting up Alert Processing

When [AMS] is selected in the classification pane, the "AMS" dialog is displayed on the edit pane.
In this dialog, the time to activate the action at the next stage when acknowledge is not performed for an alert can be set up.



Enter the wait time until an alert at the next stage is generated in [Time Limit].

Reactivation of Silenced Alert:
Set, in a range between 0 and 60s., the time required to reactivate the alert sound that was silenced temporarily.

Transfer to BNWAS:
When a BNWAS (Bridge Navigational Watch Alarm System) is connected, specify the time to transfer an unacknowledged alert to the BNWAS in a range between 0 and 60s.

Repetition of UNACK Warning:
Specify the time to regenerate an unacknowledged alert as an audible warning in a range between 0 and 300s. A warning will be generated repeatedly until it is acknowledged.

Note
- This is not applicable to the ECCW (Early Course Change Warning).

17.10 Setting Up the Alert Timer

When [Timer] is selected in the classification pane, the "Timer" dialog is displayed on the edit pane.
In this dialog, the time to generate an alarm can be set up.

17.10.1 Setting up the timer

To turn on the timer, select the [(LMT)] check box.
To turn off the timer, clear the [(LMT)] check box.

17.10.2 Setting up the time

When you click on the [Timer(LMT)] input box, the numeric value input keyboard appears. Specify the time at which to generate an alarm in a range between 00:00 and 23:59.
For the use of the numeric value input keyboard, refer to "3.15.2 Name and function of each section of the keyboard".

Section 18 Setting up the Operation Mode

18.1 Basic Operation of the "Settings" Dialog Box

You can set up the operation mode in the "Settings" dialog box.

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

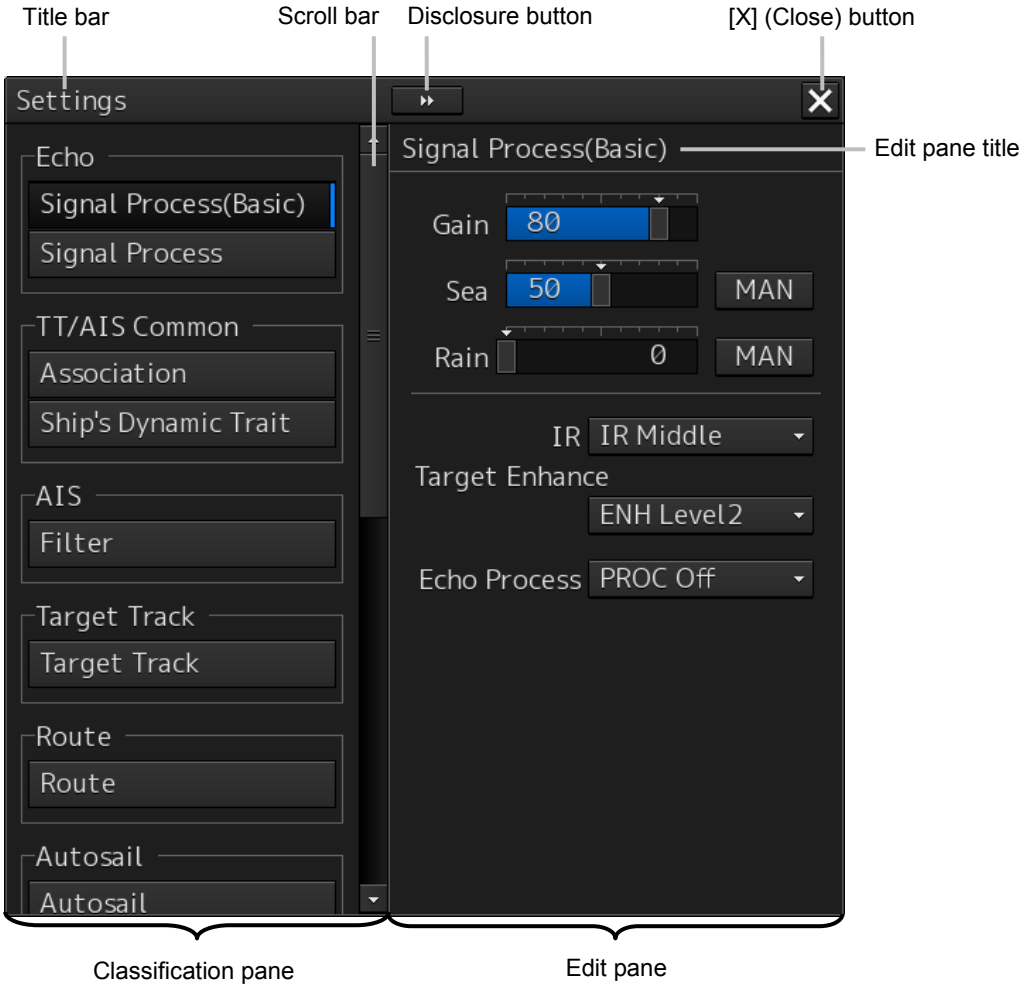
The menu is displayed.

2 Click on the [Settings] button.

The "Settings" dialog box appears.

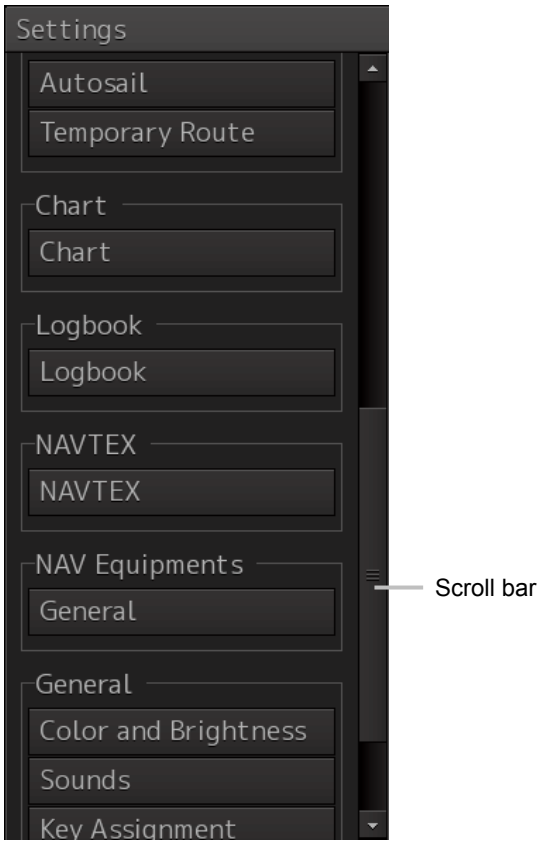
The "Settings" dialog box consists of the classification pane and the edit pane.

Click on the Disclosure button (>>) to hide the classification pane. To show the edit pane again, click on the Disclosure button (<<).



Display Example for the ECDIS

3 **When all the classification panes are not displayed, drag the scroll bar upwards and downwards.**



ECDIS display example

4 **Click on the item you want to set up in the classification pane.**

The setup dialog of the item you selected is displayed.

5 **Set up in the edit pane.**

Classification pane display targets

The table below provides the descriptions of the classification panes that are displayed by RADAR and ECDIS and the related sections.

Classification pane	Display target		Related section
	RADAR	ECDIS	
Signal Process(Basic)	-	○	18.2 Basic Settings for Radar Signal Processing
Signal Process	○	○	18.3 Setting Radar Signal Processing
Obs, Scene Preset	○	-	18.4 Presetting Each Observation Scene
Trails	○	-	18.5 Setting Other Ship's Radar Trails
TXRX	○	-	18.6 Setting Radar Antennas
Association	○	○	18.7 Setting Associations
Ship's Dynamic Trait	○	○	18.8 Setting Dynamic Traits of Own Ship
TT Test	○	-	18.9 Setting Operation Tests
Filter	○	○	18.10 Setting AIS Filters
Target Track	○	○	18.11 Setting the Target Track Function to ON/OFF
Route	○	○	18.12 Setting Parameter Values at Route Plan Creation
Autosail*1	○	○	18.13 Setting Automatic Sailing Parameter Values
Temporary Route	○	○	18.14
Chart*2	-	○	18.15 Setting Chart Operation
Logbook	-	○	18.16 Setting Logbook
NAVTEX	○	○	-
General	○	○	18.17 Setting Navigation Equipment
Color and Brightness	○	○	18.18 Setting Colors and Brightness
Sounds	○	○	18.19 Setting Sounds
Key Assignment	○	○	18.20 Setting Key Assignment
Preferences	○	○	18.21 Setting Preferences Information
Screen capture	○	○	18.22 Setting Screen Capture

*1 Displayed when the automatic sailing option is attached.

*2 Displayed when the chart display option is attached.

18.2 Basic Settings for Radar Signal Processing

Select [Signal Process (Basic)] in the classification pane.

Set a basic processing method of radar signals in the setting dialog of the edit pane (ECDIS screen only).

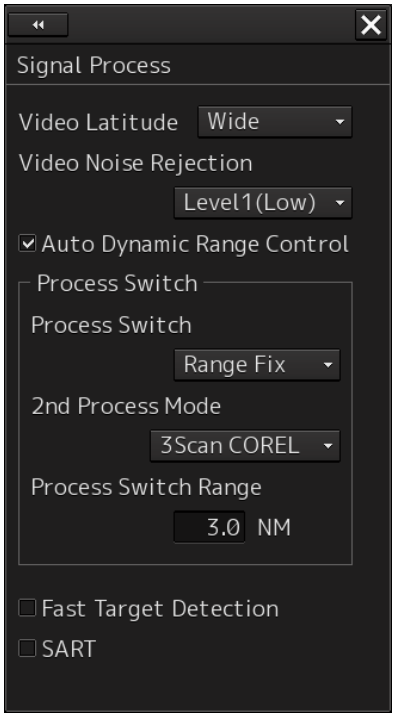
Setting Item	Description of Setting	Setting Value
Gain	Rotate the dial to set the mode to the receiving sensitivity adjustment mode.	0 to 100
Sea (sea clutter adjustment)	Rotate the dial to set the mode to the sea clutter adjustment mode. By clicking on the dial in adjustment mode or clicking on the button next to the slider, the mode can be switched between manual (MAN) and automatic (AUTO).	0 to 100 MAN: Manually removes sea clutters. AUTO: Automatically removes sea clutters.

Setting Item	Description of Setting	Setting Value
Rain (rain/snow clutter adjustment)	Rotate the dial to set the mode to the rain/snow clutter adjustment mode. By clicking on the dial in adjustment mode or clicking on the button next to the slider, the mode can be switched between manual (MAN) and automatic (AUTO).	0 to 100 MAN: Manually removes rain/snow clutters. AUTO: Automatically removes rain/snow clutters.
IR	Set up the IR (Interference Removal) function.	Off IR Low IR Middle IR High
Target Enhance	Set up the Target Enhance function.	ENH Off ENH Level1 ENH Level2 ENH Level3
Echo Process	Set up the Echo Process function. If the ship's heading cannot be acquired, [PROC Off] is set.	PROC Off 3 Scan CORREL 4 Scan CORREL 5 Scan CORREL Remain Peak Hold

18.3 Setting Radar Signal Processing

Set [Signal Process] in the classification pane.

Set various processing methods for radar signals in the setting dialog of the edit pane.



Setting Item	Description of Setting	Setting Value
Video Latitude	Set up the gradation of the radar video.	Narrow Normal Wide Super Wide
Video Noise Rejection	Set up to remove noise and signals which are considered to be clutters of radar video.	Off Level1(Low) Level2(High)
Auto Dynamic Range Control	When this is selected, the dynamic range is automatically adjusted.	To enable: Select. To disable: Clear.
Process Switch	Specify a particular area and set up a mode for performing video processing on the inside and outside of the particular area.	Off Range Fix AUTO
2nd Process Mode	Set up a processing mode used in the outside of the particular area. This is enabled when other than [Off] is being selected in the Process Switch combo box.	PROC Off 3Scan CORREL 4Scan CORREL 5Scan CORREL Remain Peak Hold
Process Switch Range	Set up the boundary range of a particular area. Enabled when [Range Fix] is selected in the Process Switch combo box.	0.1 to 25.5 NM
Fast Target Detection	When this item is enabled, high-speed moving targets that are suppressed by the scan correlation processing can be detected more easily.	To enable: Select. To disable: Clear.
SART	If it is enabled, the Radar Transponder (SART: Search and Rescue Radar Transponder) screen can be displayed. This item is valid on the RADAR screen only.	To enable: Select. To disable: Clear.

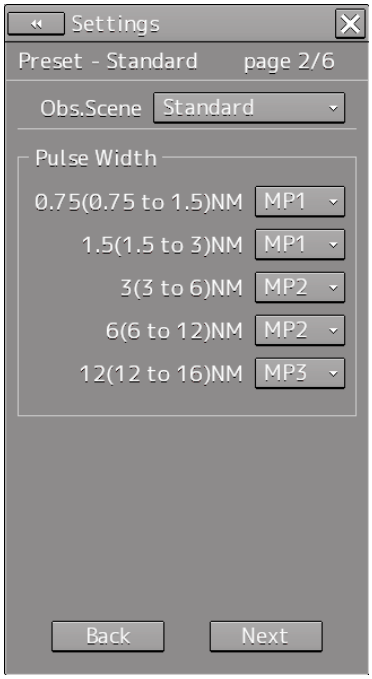
18.4 Presetting Each Observation Scene

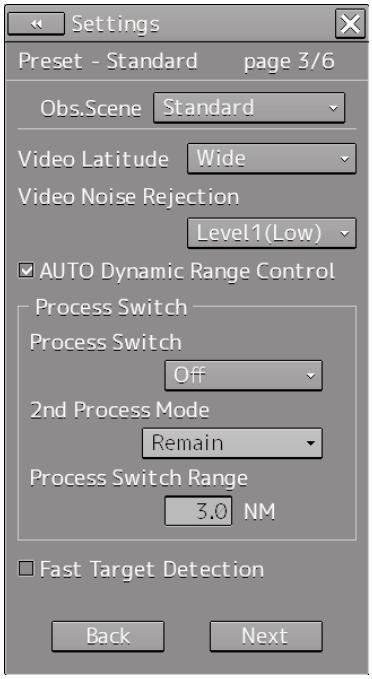
⚠CAUTION

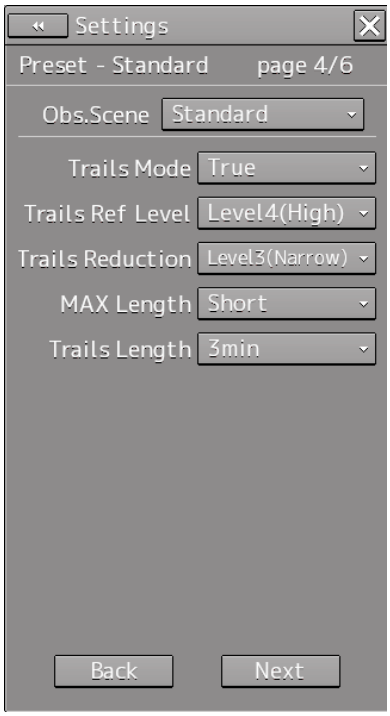
Adjust the preset of the observation scene according to the oceanographic condition, with the thorough understanding of the features of the radar signal processing setting. The optimum radar performance may not be able to be demonstrated due to the contents of the changed setting or the oceanographic condition at that time.

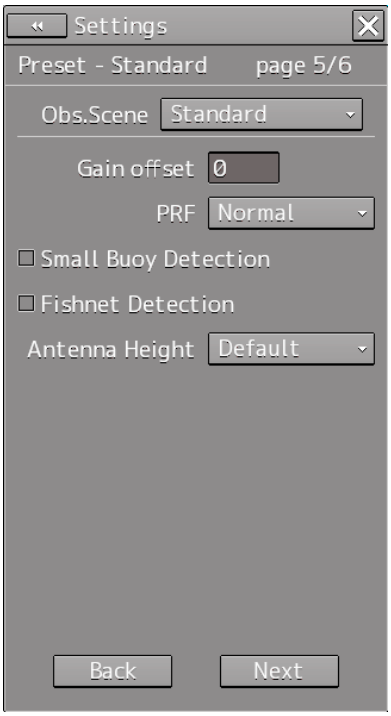
There are 12 types of observation scenes; you can preset each observation scene.
When you select [Obs, Scene Preset] in the classification pane, the items that can be preset are divided into six setup dialogs, which are then displayed in the edit pane.

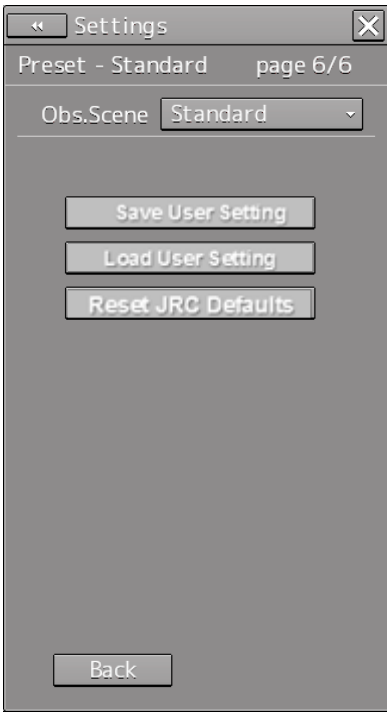
To proceed to the next page: Click the [Next] button.
To return to the previous page: Click the [Back] button.











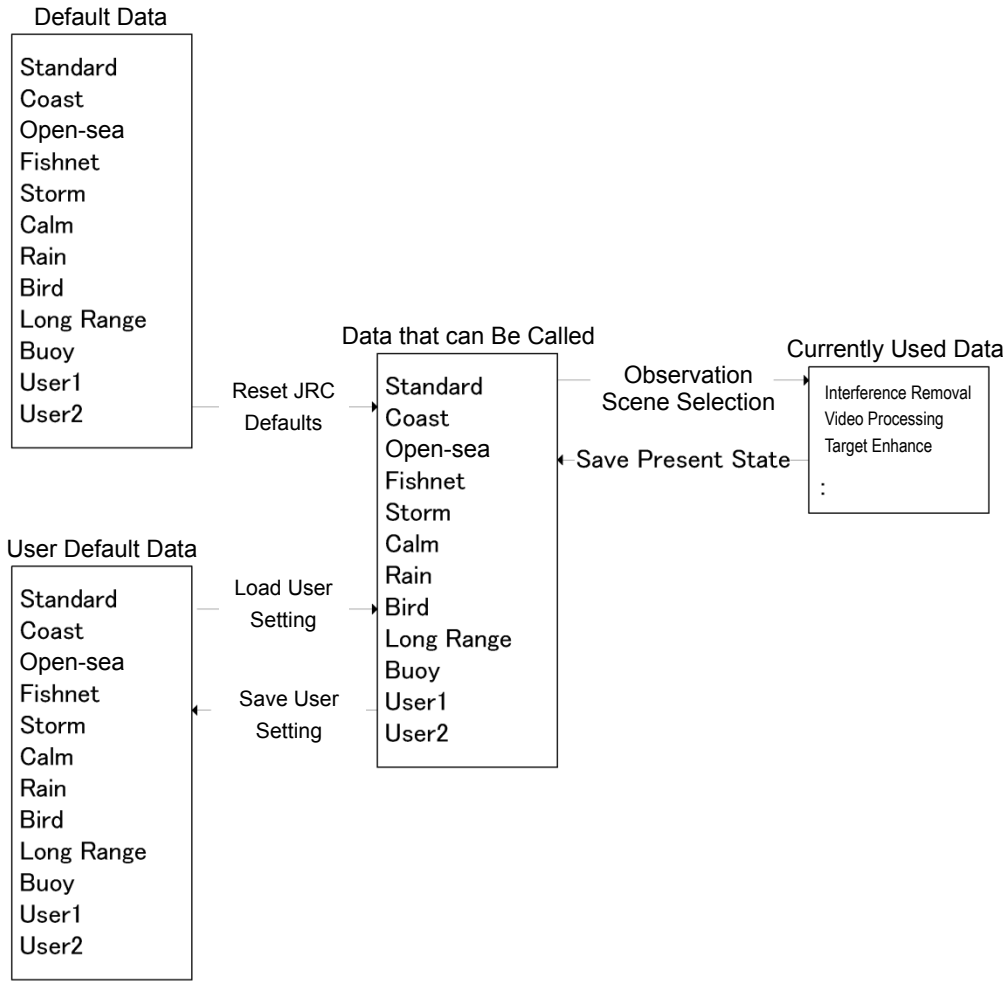
Setting Item	Description of Setting	Setting Value
Obs.Scene	Set up the observation scene.	Standard Coast Open-sea Fishnet Storm Calm Rain Bird Long Range Buoy User1 User2
IR	Set up the IR (Interference Removal) function.	Off IR Low IR Middle IR High
Target Enhance	Set up the Target Enhance function.	ENH Off ENH Level1 ENH Level2 ENH Level3
Echo Process	Set up the Echo Process function. If the ship's heading cannot be acquired, [PROC Off] is set.	PROC Off 3 Scan CORREL 4 Scan CORREL 5 Scan CORREL Remain Peak Hold

Setting Item	Description of Setting	Setting Value
Sea (sea clutter adjustment)	You can switch between MAN and AUTO.	MAN: Manually removes sea clutters. AUTO: Automatically removes sea clutters.
Rain (rain/snow clutter adjustment)	You can switch between MAN and AUTO.	MAN: Manually removes rain/snow clutters. AUTO: Automatically removes rain/snow clutters.
0.75 (0.75 to 1.5) NM	Select a pulse with of 0.75 NM range.	<Radar Antenna 10kW> SP1/MP1 <Radar Antennas 25kW, 30kW> SP1/MP1 <Solid state> SP1/MP1
1.5 (1.5 to 3) NM	Select a pulse width of 1.5 NM range.	<Radar Antenna 10kW> SP1/MP1/MP2 <Radar Antennas 25kW, 30KW> SP1/MP1/MP2/MP3 <Solid state> SP1/MP1/MP2
3 (3 to 6) NM	Select a pulse width of 3 NM range.	<Radar Antenna 10kW> SP1/MP1/MP2/LP1 <Radar Antenna 25kW> SP1/MP1/MP2/MP3/LP1 <Radar Antenna 30KW> MP1/MP2/MP3/LP1 <Solid state> SP1/MP1/MP2/LP1/LP2
6 (6 to 12) NM	Select a pulse width of 6 NM range.	<Radar Antenna 10kW> SP1/MP1/MP2/LP1/LP2 <Radar Antenna 25kW> SP1/MP1/MP2/MP3/LP1/LP2 <Radar Antenna 30KW> MP1/MP2/MP3/LP1/LP2 <Solid state> MP1/MP2/LP1/LP2
12 (12 to 16) NM	Select a pulse width of 12 NM range.	<Radar Antenna 10kW> SP1/MP1/MP2/LP1/LP2 <Radar Antenna 25kW> SP1/MP1/MP2/MP3/LP1/LP2 <Radar Antenna 30KW> MP1/MP2/MP3/LP1/LP2 <Solid state> MP2/LP1/LP2

Setting Item	Description of Setting	Setting Value
Video Latitude	Set up the radar image.	Narrow Normal Wide Super Wide
Video Noise Rejection	Set up to remove noise and signals which are considered to be clutters of radar images.	Off Level1(Low) Level2(High)
Auto Dynamic Range Control	When this is selected, the dynamic range is automatically adjusted.	To enable: Select. To disable: Clear.
Process Switch	Specify an area and set up a mode for performing video processing on the inside and outside of the area.	Off Range Fix AUTO
2nd Process Mode	Set up a processing mode used in the outside of the area. This is enabled when other than [Off] is being selected in the Process Switch combo box.	PROC Off 3Scan CORREL 4Scan CORREL 5Scan CORREL Remain Peak Hold
Process Switch Range	Set up the boundary range of a particular area.	0.1 to 25.5 NM
Fast Target Detection	When this item is enabled, high-speed moving targets that are suppressed by the scan correlation processing can be displayed more easily. This setting takes effect when the [2nd Process Mode] is [PROC3 to 5].	To enable: Select. To disable: Clear.
Trails Mode	Select a radar trail display mode.	True Relative
Trails Ref Level	Set up a video level required to draw radar trails. The higher the level gets, the higher the threshold value for drawing radar trails becomes.	Level1(Low) Level2 Level3 Level4(High)
Trails Reduction	Set up the radar trail reduction processing level. The higher the level gets, the stronger the reduction processing level becomes.	Off Level1(Wide) Level2 Level3(Narrow)

Setting Item	Description of Setting	Setting Value
MAX Length	Select the maximum value of the time to display radar trails.	Short Long
Trails Length	Set up the interval for displaying radar trails.	<When Short is specified> Off/15s/30s/1 min/3 min/ 6 min/10 min/15 min/30 min/60 min <When Long is specified> Off/30 min/1 hour/2 hour/3 hour/…(thereafter, at intervals of 1 hour)…/24 hour
Gain Offset	Set up the gain offset for sensitivity compensation.	-32 to 32
PRF	Set up the operation mode of the transmitter's repetition transmission frequency. [Economy] cannot be selected when a solid state radar antenna is connected. If a solid state radar antenna is connected while [Economy] is being selected, the setting will be reset to the default (factory preset) value.	Normal Economy High Power
Small Buoy Detection	Turn On/Off the small target detection mode.	To enable: Select. To disable: Clear.
Fishnet Detection	Turn On/Off the fishnet detection mode.	To enable: Select. To disable: Clear.
Antenna Height	Set up the radar antenna height. When this is set to [Default], the value that has been set in [Antenna Height] by selecting [Service] - [Adjustment] - [TXRX] is used.	Default -5m 5-10m 10-20m 20m-

Overview of the Observation Scene Preset function

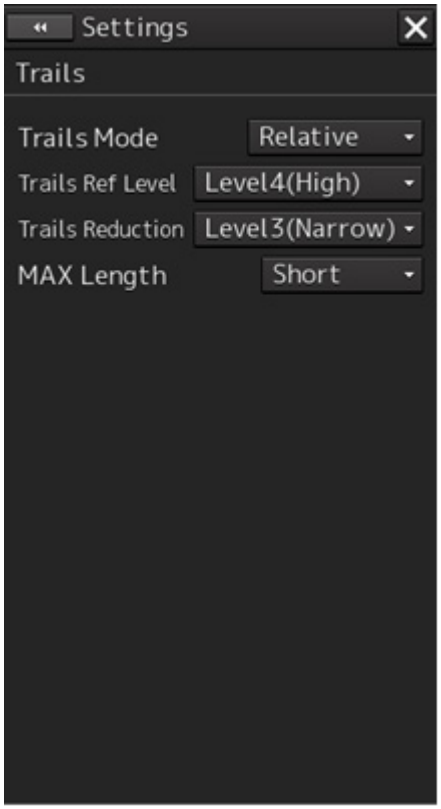


Setting Item	Description of Setting
Save Present State	The current settings are saved as the setting values of the currently selected observation scene. When this item is clicked on, the confirmation screen is displayed. To save the setting, click on [OK] and to cancel the operation, click on [Cancel].
Save User Setting	Data that can be called is saved as the user default values of the selected observation scene. When this item is clicked on, the confirmation screen is displayed. To save the setting, click on [OK] and to cancel the operation, click on [Cancel].
Load User Setting	Load the user default values to the data that can be called. When this item is clicked on, the confirmation screen is displayed. To call the set data, click on [OK] and to cancel the operation click on [Cancel].
Reset JRC Defaults	Load the default values to the data that can be called. When this item is clicked on, the confirmation screen is displayed. To call the set data, click on [OK] and to cancel the operation click on [Cancel].

18.5 Setting Other Ship's Radar Trails

Select [Trails] in the classification pane.

Set other ship's radar trails in the setting dialog of the edit pane (RADAR screen only).



Setting Item	Description of Setting	Setting Value
Trails Mode	Select a radar trail display mode.	True Relative
Trails Ref Level	Set up a video level required to draw radar trails. The higher the level gets, the higher the threshold value for drawing radar trails becomes.	Level1(Low) Level2 Level3 Level4(High)
Trails Reduction	Set up the radar trail reduction processing level. The higher the level gets, the stronger the reduction processing level becomes.	Off Level1(Wide) Level2 Level3(Narrow)
MAX Length	Select the maximum value of the time to display radar trails.	Short Long

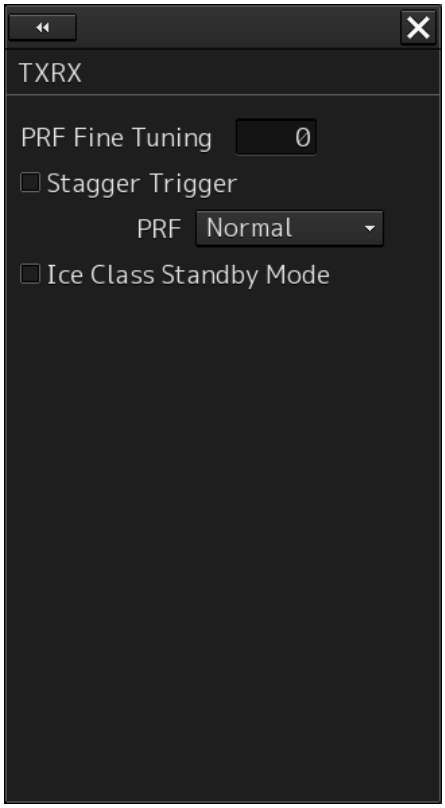
18.6 Setting Radar Antennas

Select [TXRX] in the classification pane.

Set radar antennas in the setting dialog of the edit pane (RADAR screen only).

18.6.1 Setting radar antennas

Set radar antennas.



Setting Item	Description of Setting	Setting Value
PRF Fine Tuning	You can reduce the setting value of the repetition transmission frequency by 0.2% (maximum value is 0).	0 to 31
Stagger Trigger	Select On/Off of the Radio Wave Interference Reduction function. It is not displayed when a solid state radar antenna is connected. The previous setting value is maintained, however.	To enable: Select. To disable: Clear.
PRF	Set up the operation mode of the transmitter's repetition transmission frequency. [Economy] is not displayed when a solid state radar antenna is connected. If a solid state radar antenna is connected while an operation mode is being specified, the setting will be reset to the default value.	Normal Economy High Power
Ice Class Standby Mode	Turn On/Off the Ice Class Standby mode.	To enable: Select. To disable: Clear.

Note

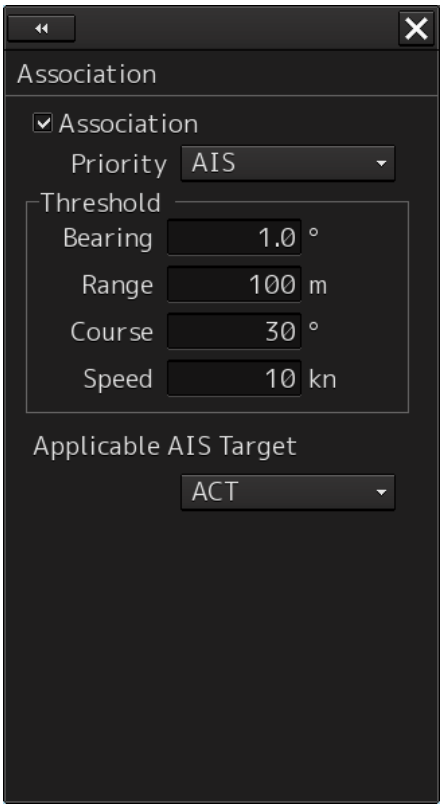
If a small solid state radar antenna is connected, the setting in [Stagger Trigger] will not be saved and it will turn On (its check box is already selected) at each startup.

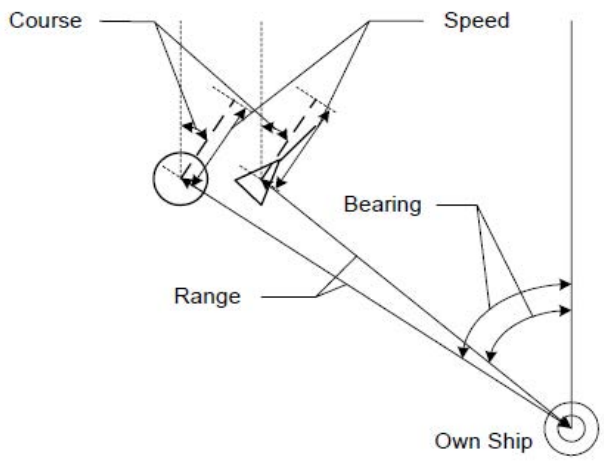
18.7 Setting Associations

Select [Association] in the classification pane.
Set TT/AIS in the setting dialog of the edit pane.
The AIS target and the tracking target are checked if they are identical and if so, an association symbol is displayed for the targets. In this case, the AIS target symbol is automatically activated.

Note

If you don't want to perform an identical target judgement, or if you want to display hidden symbols, turn the association setting to Off.



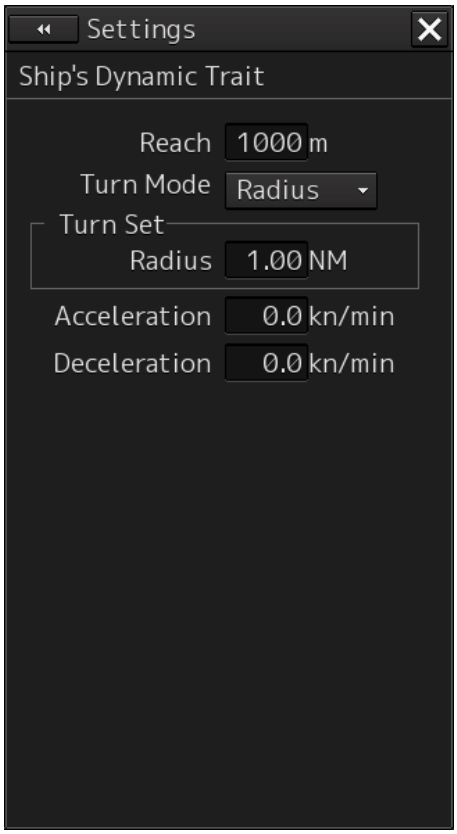


Setting Item	Description of Setting	Setting Value
Association	Turn On/Off the association setting.	To enable: Select. To disable: Clear.
Priority	Select a priority of association target display.	AIS TT
Bearing	Set up the bearing difference of the association target.	0.0 to 9.9°
Range	Set up the range difference of the association target.	0 to 999 m
Course	Set up the course difference of the association target.	0 to 99°
Speed	Set up the speed difference of the association target.	0 to 99 kn
Applicable AIS Target	Select a state of the AIS which will be an association target. Only the AIS target you specified will be an association target.	ACT ACT&Sleep

18.8 Setting Own Ship's Dynamic Trait

Select [Ship’s Dynamic Trait] in the classification pane.

Set dynamic traits of own ship in the setting dialog of the edit pane.

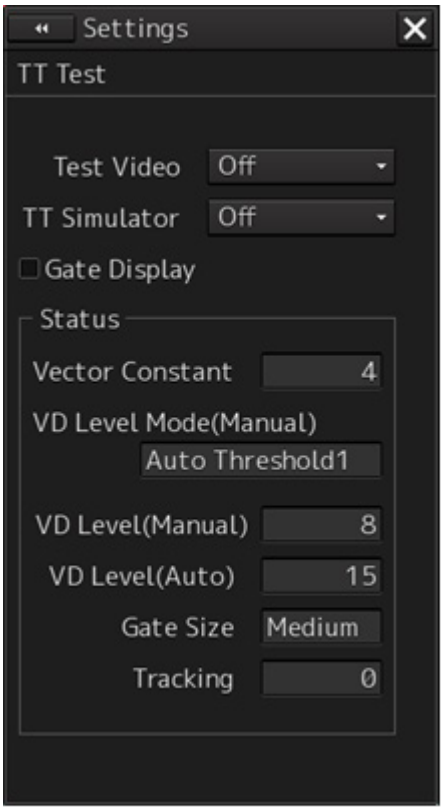


Setting Item	Description of Setting	Setting Value
Reach	Set up the distance to reach the turn.	0 to 2000 m
Turn Mode	Set up the Turn mode.	Radius Rate
Radius	Enter the radius of the turn rate. This is displayed when [Radius] is selected in the [Turn Mode] box.	0.10 to 2.00 NM
Rate	Enter the speed of the turn rate. This is displayed when [Rate] is selected in the [Turn Mode] box.	20 to 720°/min
Acceleration	Enter the rate of change of speed (acceleration) of own ship's dynamic trait.	0.0 to 100.0 kn/mir
Deceleration	Enter the rate of change of speed (deceleration) of own ship's dynamic trait.	0.0 to 100.0 kn/mir

18.9 Setting Operation Tests

Select [TT Test] in the classification pane.

Set an operation test in the setting dialog of the edit pane (RADAR screen only).



Setting Item	Description of Setting	Setting Value
Test Video	Set up the type of test video.	Off VDIN
TT Simulator	Set up the scenario of the TT Simulator mode.	Off Scenario1 Scenario2 Scenario3 Scenario4 Scenario5 Scenario6
Gate Display	Switches between On/Off of the Gate Display mode.	To enable: Select. To disable: Clear.
Vector Constant	Set up the vector's tracking performance.	1 to 8
VD Level Mode (Manual)	Display the threshold value display method of the quantization mode at manual acquisition.	Auto Threshold1 Auto Threshold2 Manual Threshold

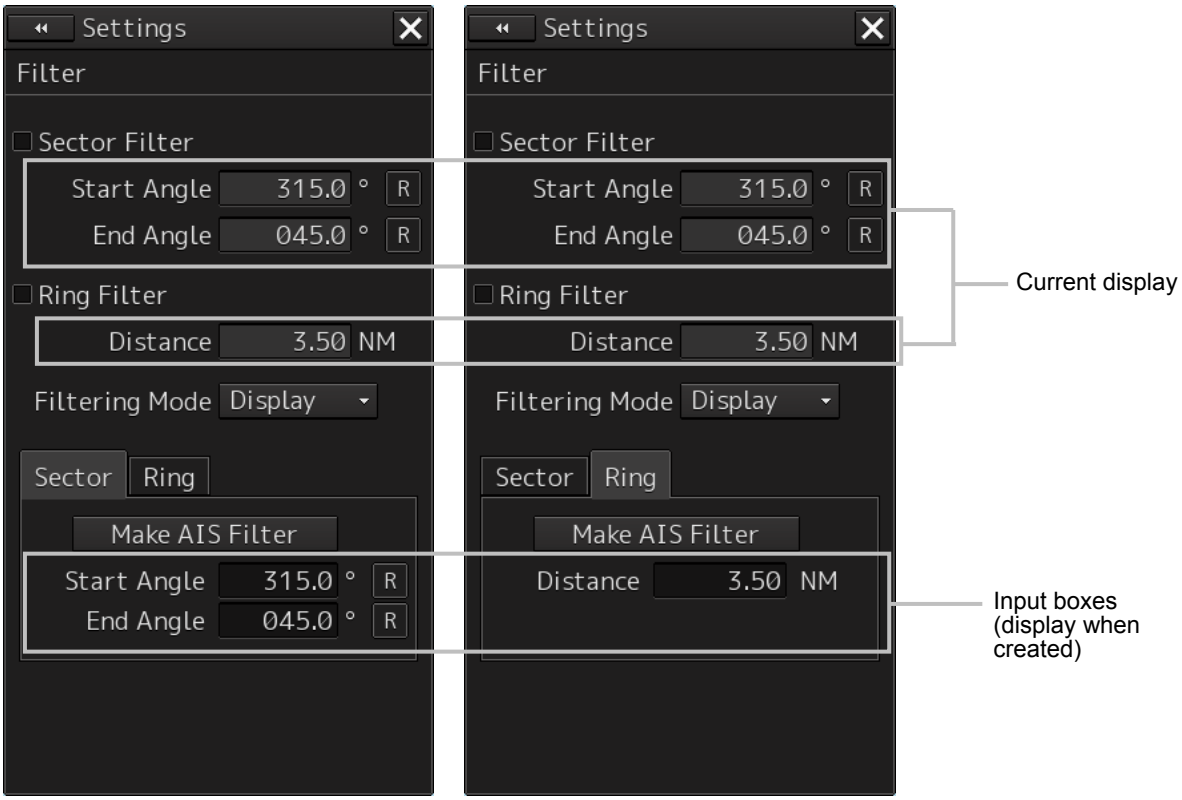
Setting Item	Description of Setting	Setting Value
VD Level (Manual)	Set up the quantization level when acquiring manually.	0 to 255
VD Level (Auto)	Set up the quantization level when acquiring automatically.	0 to 255
Gate Size	Display the gate size to be used for tracking.	Small Medium Large
Tracking	The number of currently acquired targets is displayed in a range from 0 to the maximum TT display count.	-

18.10 Setting AIS Filters

Select [Filter] in the classification pane.

Set an AIS filter in the setting dialog of the edit pane.

By setting an AIS filter, the AIS target within the area can be displayed preferentially or only the inside of the area can be displayed.



Setting Item	Description of Setting	Setting Value
Sector Filter	When this is selected, the Sector Filter is displayed on the screen and filtering is performed in the operation mode being selected in Filtering mode.	To enable: Select. To disable: Clear.
Start Angle	Set up the starting angle of the Sector Filter. The angle value indicates the relative bearing based on the ship's heading as the reference. When entry is confirmed, the entered value takes effect immediately.	0.0 to 359.9°
End Angle	Set up the end angle of the Sector Filter. The angle value indicates the relative bearing based on the ship's heading as the reference. When entry is confirmed, the entered value takes effect immediately.	0.0 to 359.9°
Ring Filter	When this is selected, the Ring Filter is displayed on the dialog box and filtering is performed in the operation mode being selected in Filtering mode.	To enable: Select. To disable: Clear.
Distance	Set up the distance of the Ring Filter. When entry is confirmed, the entered value takes effect immediately.	0.0 to 120.0 NM

Setting Item	Description of Setting	Setting Value
Filtering Mode	Select an operation mode of the AIS filter. Display: AIS targets cannot be displayed outside of the AIS filter range. Priority: Priority is determined within the range of the AIS filter and AIS targets are displayed based on the priority.	Display Priority

Creating a filter in the dialog

Creating a Sector Filter

1 **Click on the [Sector] tab.**

2 **Click on [Make AIS Filter].**
The button is highlighted and the cursor mode is set to the Make AIS Filter mode.

3 **Move the cursor, place it on the starting angle of the Sector filter you want to set up, and then click on it.**

4 **Move the cursor, place it on the end angle of the Sector filter you want to set up, and then click on it.**

Creating a Ring Filter

1 **Click on the [Ring] tab.**

2 **Click on [Make AIS Filter].**
The button is highlighted and the cursor mode is set to the Make AIS Filter mode.

3 **Move the cursor, place it on the distance of the Ring filter you want to set up, and then click on it.**

Note
When the AZ function is ON, a distance smaller than the outer arc of AZ cannot be set for the Ring filter.

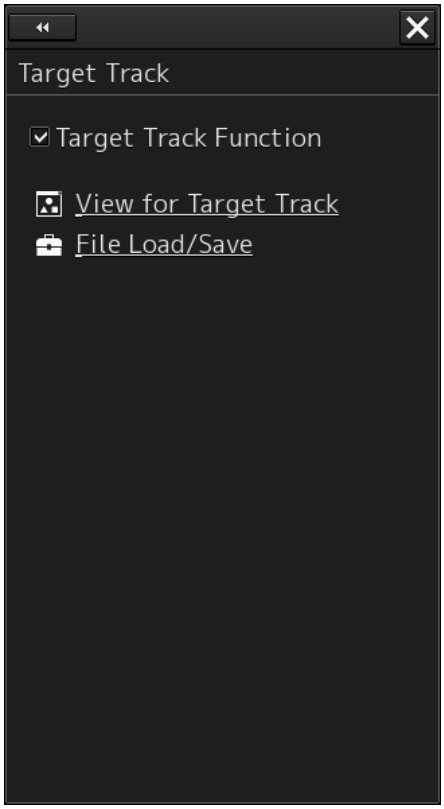
Memo
<Priority setting>
- The sleeping AIS in the AIS filter has a higher priority than the sleeping AIS outside of the AIS filter (preferentially displayed).

<AIS Filter OFF>
- The sleeping AIS in the AIS filter has the same prioirty as the sleeping AIS outside of the filter.

18.11 Setting the Target Track Function to ON/OFF

Select [Target Track] in the classification pane.

Set the target track function to ON/OFF in the setting dialog of the edit pane.



Setting Item	Description of Setting	Setting Value
Target Track Function	Turn On/Off the target track function.	To enable: Select. To disable: Clear.

Shortcuts

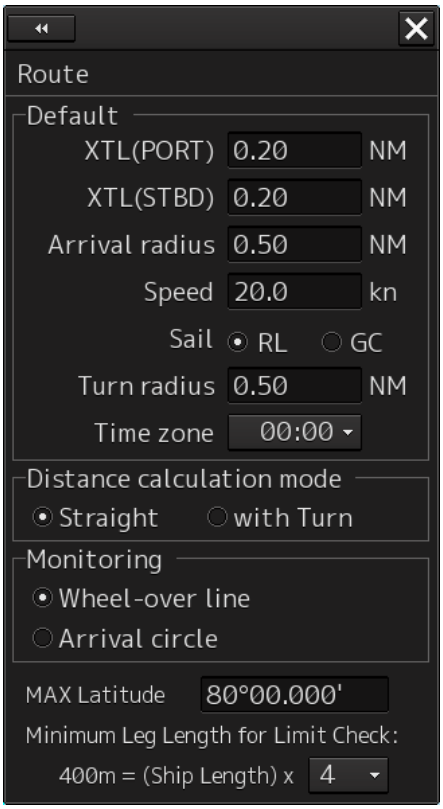
Click on any of the following shortcuts to display the related dialog box.

Shortcut	Settings Dialog Box
View for Target Track	"Target Track" dialog box
File Load/Save	"File Manager" dialog box

18.12 Setting Parameter Values at Route Plan Creation

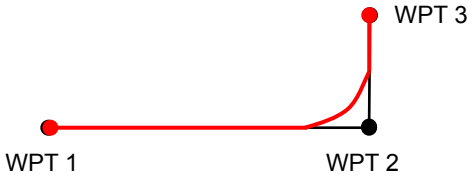
Select [Route] in the classification pane.

Set various parameter values at route plan creation in the setting dialog of the edit pane.



Set up the default values for routes to be created during route planning.

Setting Item	Description of Setting	Setting Value
XTL(PORT)	Set up the cross track limit of the port side.	0.01 to 9.99 NM
XTL(STBD)	Set up the cross track limit of the starboard side.	0.01 to 9.99 NM
Arrival radius	Set up the radius of the WPT (waypoint) arrival circle.	0.01 to 9.99 NM
Speed	Set up the planned speed.	1.0 to 99.9 kn
Sail	Set up sailing (RL (Rhumb Line) or GC (Great Circle)).	RL GC
Turn Radius	Set up the turn radius.	0.10 to 9.99 NM
Time Zone	Set up the time zone.	-13:30 to +13:30

Setting Item	Description of Setting	Setting Value
Distance Calculation Mode	Set up the calculation method of the distance between WPTs. Straight: Calculates the distance between WPTs linearly (red line). With Turn: Calculates the distance between WPTs using a predicted route (red line).  	Straight with Turn
Monitoring	Set up the route monitoring method. Wheel-over Line: monitored by using Wheel-over line (WOL) along each WPT. Arrival Circle: monitored by using the arrival circle along each WPT. The setting will be changed according to the type of auto pilot during automatic sailing.	Wheel-over Line, Arrival Circle
MAX Latitude	Because a WPT cannot be entered at a latitude higher than the latitude you set up when planning a route, this threshold is used to check the latitude of the destination during active route reception. If the threshold value is abnormal, an active route will not be loaded even if it is received. When creating a GC leg, if a leg is positioned over the latitude you set up, the composite sailing will take effect automatically and the leg will be divided into three segments. (GC-RL-GC)	30°00.000' to 80°00.000'
Minimum Leg Length for Limit Check	Select a multiplier for determining the "Minimum Leg Length" which will be used for limit check. Minimum leg length = (Ship length) × Multiplier (τ multiplier)	1, 2, 4, 6, 8

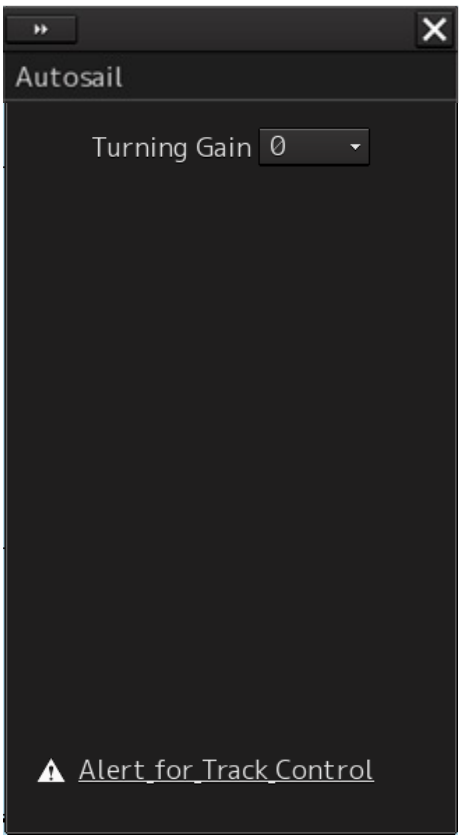
18.13 Setting Automatic Sailing Parameter Values

Select [Autosail] in the classification pane.

Set various parameter values relating to automatic sailing in the setting dialog of the edit pane.

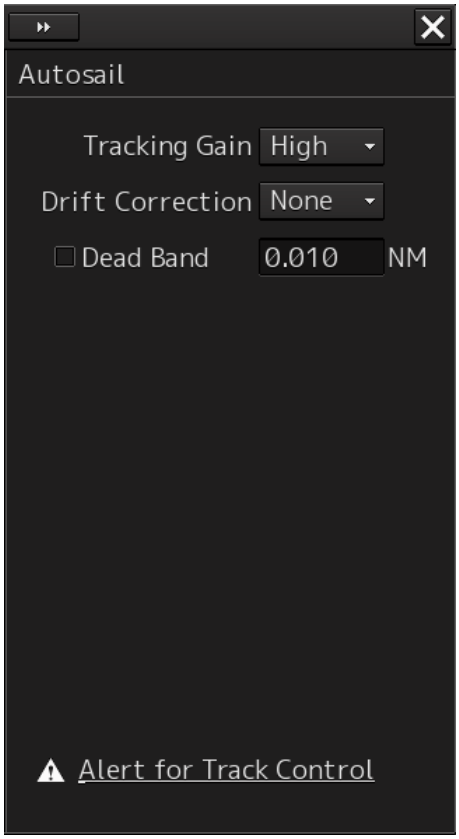
Note

Displayed when the automatic sailing option is attached.



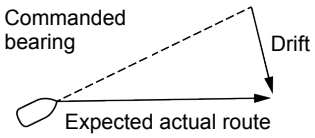
Example of screen display under the following conditions:

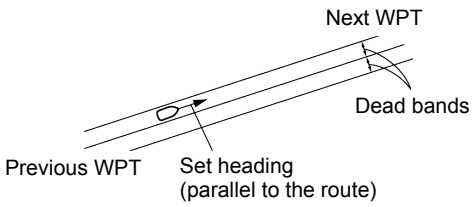
- Tokyo Keiki TCS Category C
- Tokyo Keiki TCS Category B (new system)



Example of screen display under the following conditions:

- Tokyo Keiki TCS Category B (old system)
- YDK TCS Category C

Setting Item	Description of Setting	Setting Value
Tracking Gain	Set up the tracking gain. This can be set up even during automatic sailing. The tracking gain value specifies how quickly the ship will return to the original course when it has deviated from the course. You can select from three tracking gain settings of [High], [Middle] and [Low]. For example, assume that the target gain value is being set to "16 deg./NM" and the own ship is positioned at 1 NM right of the tracking gain. In this case, specify the distance for the own ship to approach the target at an angle of 16°. If the distance between the own ship and the target course is shortened, this angle will also be reduced. When the own ship has reached the target course, the angle will be the same as WP1 viewed from 0 of a WPT, and the more the LD will be, the larger this angle will get. Note that you may lose the control of the helm depending on the tracking gain value, so be careful with the setting.	Low Middle High
Drift Correction	Set up the drift correction. This can be set up even during automatic sailing. When this is set to On (High/Middle/Low), control is performed considering the tide if the own ship's speed is 5 knots or faster.  None: Off (Drift correction will not be performed.) High: Drift correction will be performed. The drift correction value is equivalent to the tidal vector (100%). Middle: Drift correction will be performed. The drift correction value is 2/3 of the tidal vector. Low: Drift correction will be performed. The drift correction value is 1/3 of the tidal vector.	None High Middle Low

Setting Item	Description of Setting	Setting Value
Dead Band (On/Off)	Set up On/Off of the dead band. This can be set up even during automatic sailing. To prevent yawing while navigation, it is necessary to provide dead bands at both sides of the current course. If the own ship is positioned within the dead band course, the course will be fixed at [Track Course]. For more details, see the following drawing.  	To enable: Select. To disable: Clear.
Dead Band (setting value)	Specify the dead band value. This can be set up even during automatic sailing.	0.001 to 0.999 NM
Turning Gain Display when the TCS is • Tokyo Keiki TCS Category C • Tokyo Keiki TCS Category B (new system)	Set up the turning gain. This can be set up even during automatic sailing. The turning gain represents how much the turning radius will be changed according to the XTD when changing the course. You can select the turning gain in a range from 0 to 4. • 0: Changes the course using the planned radius without depending on the XTD during course change. • 1 to 4: Changes the turning radius according to the XTD during course change. (1 is the weakest gain and 4 is the strongest gain.)	0 to 4

Shortcut

Click on the following shortcut to display the related dialog box.

Shortcut	Settings Dialog Box
Alert for Track Control	"Track Control" dialog box

18.14 Setting the Temporary Route Setting Values

Select [Temporary Route] in the classification pane.

In the setting dialog of the edit pane, perform the necessary setting relating to the temporary route.

Before starting automatic sailing, move own ship along the leg.

Setting Item	Description of Setting	Setting Value
Pre Run Speed	Set a planned ship speed of the temporary route to calculate the minimum leg length.	0.0 to 99.9 kn
Pre Run Time	Set a planned time of the temporary route to calculate the minimum leg length.	1.0 to 30.0 min
Pre Run Distance	Set a planned distance of the temporary route.	0.10 to 9.99 NM
Enter Angle	Set an entrance angle of the temporary route.	30.0 to 90.0°
Turn radius	Set an initial turn radius of the temporary route.	0.10 to 1.00 NM
XTD MAX	Set the maximum XTD of the temporary route.	0.0 to 1.0 NM

Memo

The minimum leg length is expressed in the following formula.

Minimum leg length = (planned ship speed of the temporary route × planned time of the temporary route) + planned distance of the temporary route + reach

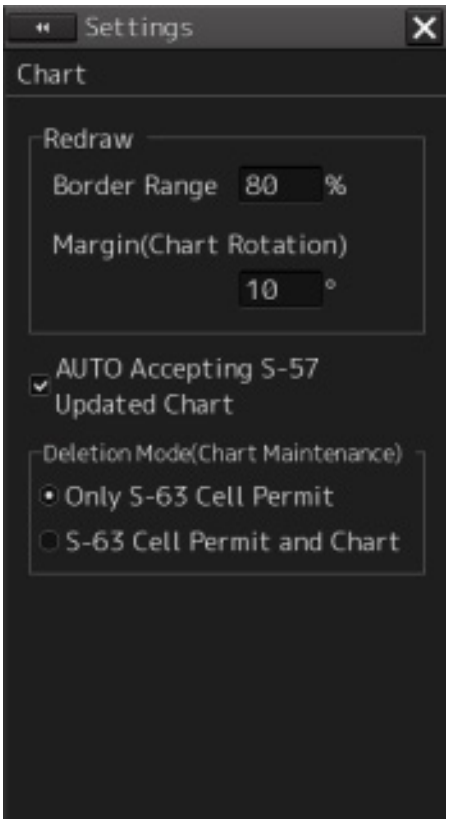
18.15 Setting Chart Operation

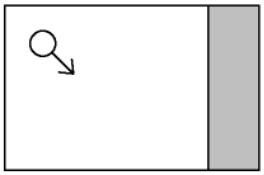
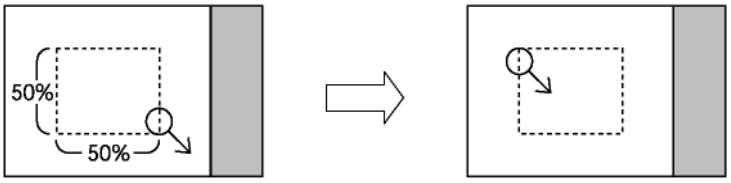
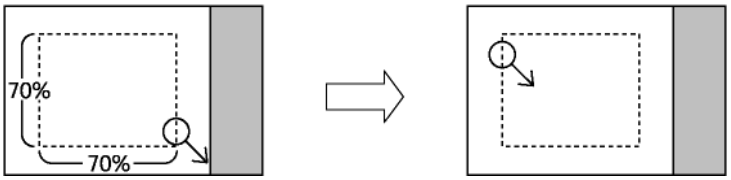
Note

The Deletion Mode (Chart Maintenance) is displayed on the ECDIS screen and the RADAR screen (chart display option). Others are displayed on the ECDIS screen only.

Select [Chart] in the classification pane.

Set chart operation in the setting dialog of the edit pane.



Setting Item	Description of Setting	Setting Value
Border Range	Set up the range for the own ship in order to move the chart. This is displayed only on the ECDIS screen. • When the own ship is sailing in the direction of the arrow in the figure below.  • If the border range you set up is 50%, the screen display switches when the own ship reaches a 50% area from an edge of the screen.  • If the border range you set up is 70%, the screen display switches when own ship reaches the border range.  	30 to 80 %
Margin (Chart Rotation)	When head-up, if own ship turns at the angle specified here, the chart will also turn. For example, if the margin is set to 10°, the chart will turn when own ship turns 10° or more.	0 to 90°
AUTO Accepting S-57 Updated Chart	Set whether the chart is accepted automatically at completion of chart import.	Accepted automatically: Check Not accepted automatically: Not check
Deletion Mode(Chart Maintenance)	Set the operation mode of the Delete button on the status screen in Chart Maintenance. Only S-63 Cell Permit: Deletes the license only when the Delete button is pressed. S-63 Cell Permit and Chart: Deletes the license and chart when the Delete button is pressed.	Only S-63 Cell Permit S-63 Cell Permit and Chart

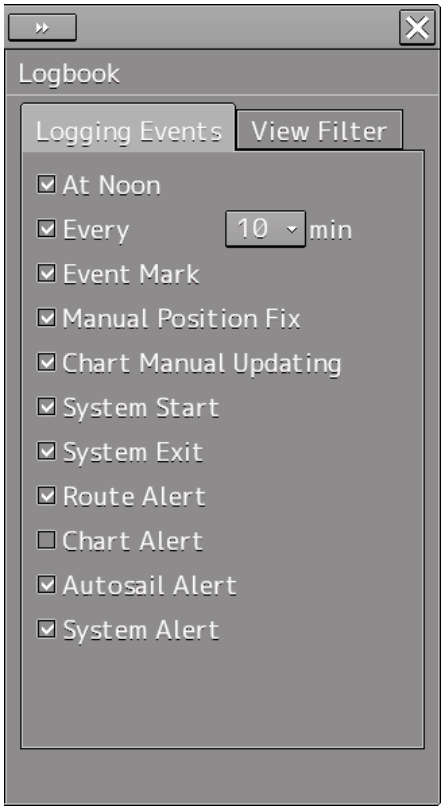
Memo

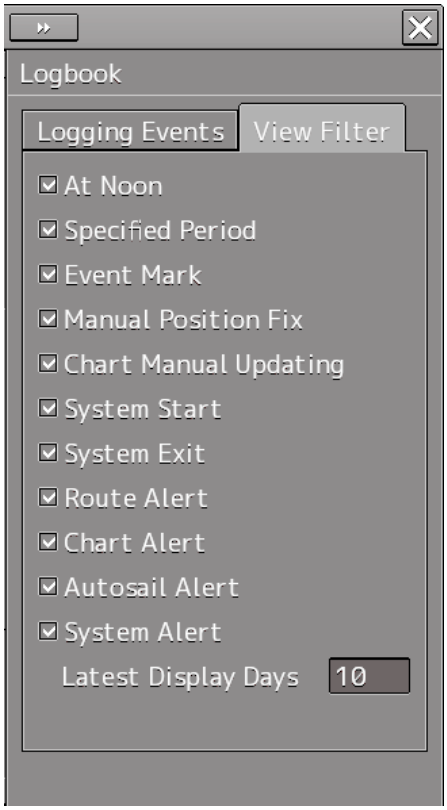
The setting of Deletion Mode(Chart Maintenance) is valid only under S-63 (ENC that requires the permit). Under S-57 (ENC that does not require the permit), the chart is also deleted regardless of this setting.

18.16 Setting Logbook

Select [Logbook] in the classification pane.

Set Logbook in the setting dialog of the edit pane (ECDIS screen only).





[Logging Events] tab

Setting Item	Description of Setting	Setting Value
At Noon	When this is selected, log data is saved at 12:00 (LMT).	To enable: Select. To disable: Clear.
Every ([Logging Events] tab)	When this is selected, log data is saved at the interval specified in the combo box.	<Check box> To enable: Select. To disable: Clear. <Selections in the combo box> 1/3/5/10/15/30/60 min
Event Mark	When this is selected, log data is saved when the EVENT button is pressed.	To enable: Select. To disable: Clear.
Manual Position Fix	When this is selected, the time, bearing, position, objects used during manual position fixing in cross bearing or running fix are saved.	To enable: Select. To disable: Clear.
Chart Manual Updating	When this is selected, log data is saved when the chart is manually updated.	To enable: Select. To disable: Clear.

Setting Item	Description of Setting	Setting Value
System Start	When this is selected, log data is saved when the system is started.	To enable: Select. To disable: Clear.
System Exit	When this is selected, log data is saved when the system is shut down.	To enable: Select. To disable: Clear.
Route Alert	When this is selected, log data is saved when a route-related alert is generated.	To enable: Select. To disable: Clear.
Chart Alert	When this is selected, log data is saved when a chart-related alert is generated.	To enable: Select. To disable: Clear.
Autosail Alert	When this is selected, log data is saved when an autosail-related alert is generated.	To enable: Select. To disable: Clear.
System Alert	When this is selected, log data is saved when a system-related alert is generated.	To enable: Select. To disable: Clear.

[View Filter] tab

Setting Item	Description of Setting	Setting Value
At noon	When this is selected, the events saved at 12:00 (LMT) are displayed in the list.	To enable: Select. To disable: Clear.
Specified Period	When this is selected, the events saved at the interval specified in [Logging] are displayed in the list.	To enable: Select. To disable: Clear.
Event Mark	When this is selected, the events saved when the EVENT button was pressed are displayed in the list.	To enable: Select. To disable: Clear.
Manual Position Fix	When this is selected, the events saved during manual position fixing in cross bearing or running fix are displayed in the list.	To enable: Select. To disable: Clear.
Chart Manual Updating	When this is selected, the events saved when the chart was manually updated are displayed in the list.	To enable: Select. To disable: Clear.
System Start	When this is selected, the events saved when the system was started are displayed in the list.	To enable: Select. To disable: Clear.
System Exit	When this is selected, the events saved when the system was shut down are displayed in the list.	To enable: Select. To disable: Clear.

Setting Item	Description of Setting	Setting Value
Route Alert	When this is selected, the events saved when a route-related alert was generated are displayed in the list.	To enable: Select. To disable: Clear.
Chart Alert	When this is selected, the events saved when a chart-related alert was generated are displayed in the list.	To enable: Select. To disable: Clear.
Autosail Alert	When this is selected, the events saved when an autosail-related alert was generated are displayed in the list.	To enable: Select. To disable: Clear.
System Alert	When this is selected, the events saved when a system-related alert was generated are displayed in the list.	To enable: Select. To disable: Clear.
Latest Display Days ( )	The days on which the items saved in the Other event were specified are displayed in a range between 1 and 90.	1 to 90

18.17 Setting Navigation Equipment

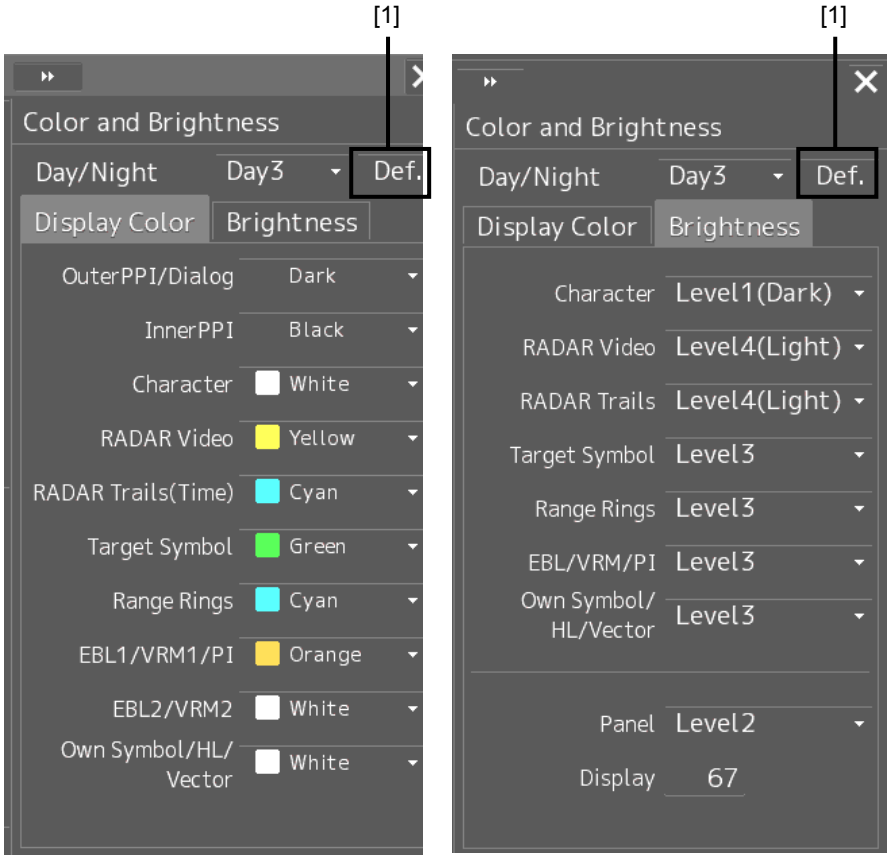
Select [General] in the classification pane.

Set navigation equipment in the setting dialog of the edit pane.

Setting Item	Description of Setting	Setting Value
GYRO Setting	Enter the initial value of the gyro.	0.0 to 359.9°

18.18 Setting Colors and Brightness

Select [Color and Brightness] in the classification pane.
Set the color and the brightness of the display contents in the setting dialog of the edit pane.



[1] [Def.] (default value) button

When this button is clicked on, all the setting items of the mode that is selected on the [Day/Night] combo box are reset to the default values.

Setting Item	Description of Setting	Setting Value
Day/Night	Set up the color of the dialog box itself. Select the chart display colors from the three types of Day1, Day3 and Night when the ARCS is used.	Day1 [default] Day2 Day3 Dusk Night

Setting Item	Description of Setting	Setting Value
[Display Color] tab		
Outer PPI/Dialog	Set up the color outside the PPI. The label changes depending on the screen to be called. The label will be Outer PPI/Dialog for the RADAR screen, and Dialog for others.	Dark [default] Black
Inner PPI	Set up the color inside the PPI. This item is displayed only on the RADAR screen.	Blue Dark Blue Black [default]
Character	Set up the text color.	White [default other than Dusk or Night] Green [default of Dusk] Gold Orange Dark Red [default of Night]
RADAR Video	Set up the color of radar video. Displays on the ECDIS screen which has a PADAR screen and PADAR display function.	Yellow [default] Green Orange Purple Dark Red
RADAR Trails(Time)	Set up the color of radar trails. This item is displayed only on the RADAR screen.	White Blue Cyan [default] Green
Target Symbol	Set up the color of the target symbol.	White/Black*1 Cyan Green [default] Orange
Range Rings	Set up the color of range rings.	White/Black*1 Cyan [default] Green Orange
EBL1/VRM1/PI	Set up the color of EBL1, VRM1 and parallel index lines.	White/Gray*1 Cyan Green Orange [default]
EBL2/VRM2	Set up the color of EBL2 and VRM2.	White/Gray*1 [default] Cyan Green Orange
Own Symbol/HL/Vector	Set up the color of own ship symbol, heading line and vector.	White/Black*1 [default] Cyan Green Orange

Setting Item	Description of Setting	Setting Value
[Brightness] tab		
Character	Set up the text brilliance.	Level1(Dark) [default of Day 3] Level2 [default of Day 2, Dusk] Level3 [default of Day 1] Level4(Light) [default of Night]
RADAR Video	Set up the brilliance of radar video.	Level1(Dark) Level2 Level3 Level4(Light) [default]
RADAR Trails	Set the brightness of the radar image trail. Displayed on the RADAR screen only.	Level1(Dark) Level2 Level3 Level4(Light) [default]
Target Symbol	Set up the brilliance of the target symbol.	Level0(Dark) Level1 Level2 Level 3[default of Day3/Dusk/Night] Level4(Light) [default of Day1/2]
Range Rings	Set up the brilliance of range rings.	Level1(Dark) Level2 [default of Night] Level3 [default of DAY3/Dusk] Level4(Light) [default of Day1/2]
EBL/VRM/PI	Set up the brilliance of EBL, VRM and parallel index lines.	Level1(Dark) Level2 Level3 [default of DAY3/Dusk/Night] Level4(Light) [default of Day1/2]
Own Symbol/HL/Vector	Set up the brilliance of own ship symbol, heading line and vector.	Level1(Dark) Level2 Level3 [default of DAY3/Dusk/Night] Level4(Light) [default of Day1/2]

Setting Item	Description of Setting	Setting Value
Panel	Set the brightness of the operation unit.	Off Level1(Dark) [default of Dusk/Night] Level2 [default of Day3] Level3 [default of Day2] Level4(Light) [default of Day1]
Display	Set the value that is input in the box for the brightness of the display unit.	0 to 100*2

*1: Under either of the following conditions in the ECDIS task, Black or Gray can be selected instead of White.

- ENC is displayed while [Day/Night] is set to Day1 or Day2.
- ARCS is displayed while [Day/Night] is set to Day.

*2 The brightness default values are as follows.

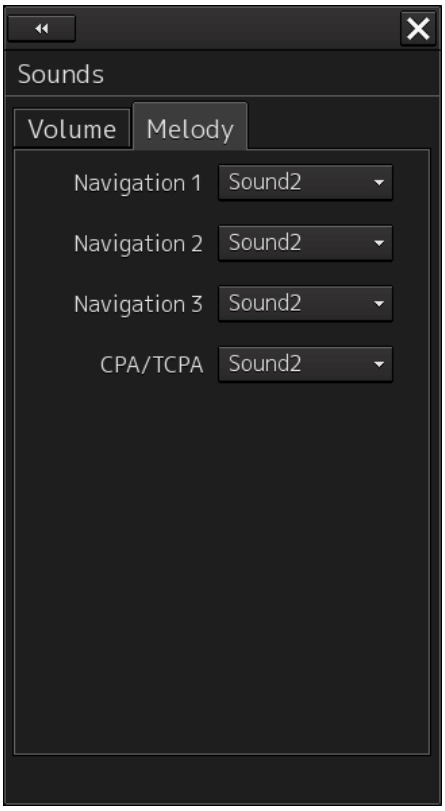
26inch screen	19inch screen
Day1/Day2/Day3: 67 Dusk: 60 Night: 11	Day1/Day2/Day3: 42 Dusk: 20 Night: 4

18.19 Setting Sounds

Select [Sounds] in the classification pane.

Set the volumes of the operation sound and operation error sound and alarm melody in the setting dialog of the edit pane.

When the volume or melody is changed, the selected volume or melody is played back, enabling the user to set while listening to the sound.



Setting item	Setting contents	Setting value
[Volume] tab		
Key ACK	Set the volume of the sound emitted when the key is pressed.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Misoperation	Set the volume of the operation error sound.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Response/Notification	Set the volume of the control response sound to external equipment and control completion notification sound (including the interswitch control) from external equipment.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Message Notification	Set the volume of the message notification sound.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Alert Setting Reminder	Set the volume of the sound notifying that the alarm condition has not been set.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Navigation 1 Alarm	Set the volume of the navigation alarm sound.	Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Navigation 2 Alarm		
Navigation 3 Alarm		
CPA/TCPA Alarm	Set the volume of the CPA/TCPA alarm sound.	Level1(Soft) Level2 Level3 [Default] Level4(Loud)
Warning	Set the volume of the system alarm sound.	Off Level1(Soft) Level2 Level3 [Default] Level4(Loud)

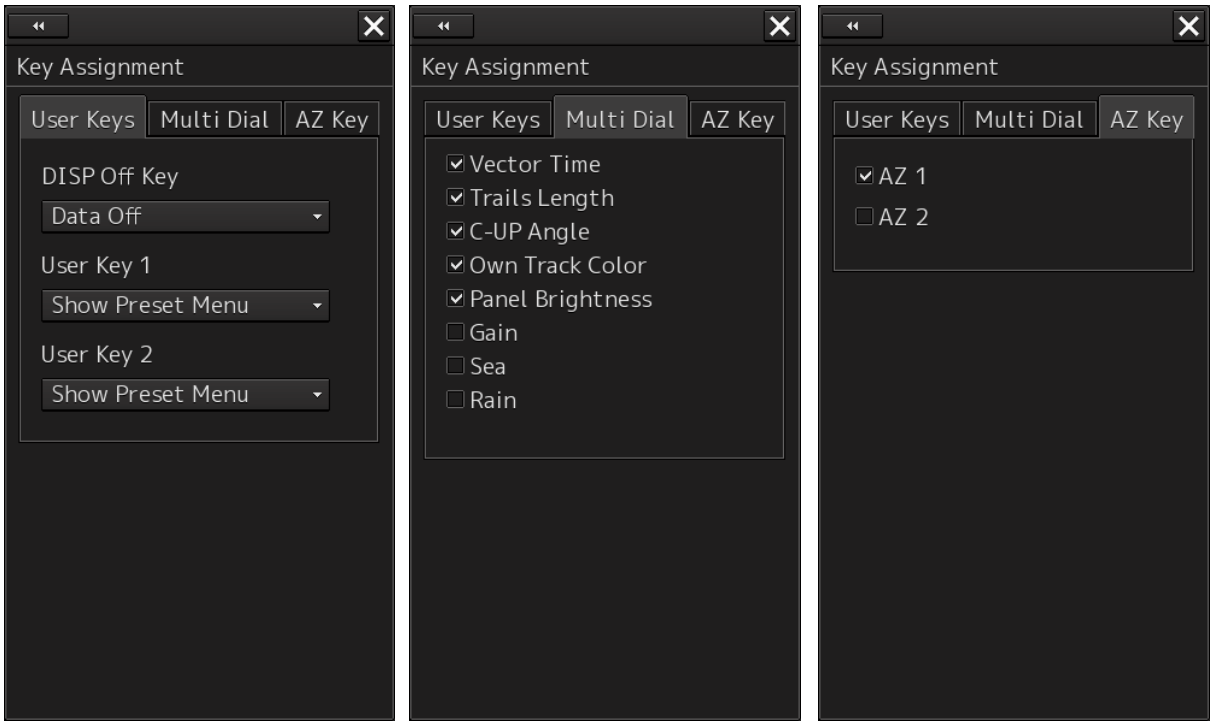
Setting item	Setting contents	Setting value
[Melody] tab		
Navigation 1	Set the melody of the Navigation 1 alarm.	Sound1 Sound2 Sound3 Sound4
Navigation 2	Set the melody of the Navigation 2 alarm.	Sound1 Sound2 Sound3 Sound4
Navigation 3	Set the melody of the Navigation 3 alarm.	Sound1 Sound2 Sound3 Sound4
CPA/TCPA	Set the melody of the CPA/TCPA alarm.	Sound1 Sound2 Sound3 Sound4

Memo

Sound1 to Sound4 are currently the same sound.

18.20 Setting Key Assignment

Select [Key Assignment] in the classification pane.
Set the keys in the operation unit and the function assigned to the [MULTI] dial in the setting dialog of the edit pane.
Only the items whose functions are available on the task screen are displayed on the screen.



The [User Keys] and [AZ Key] tabs are displayed only when the optional operation unit is installed.

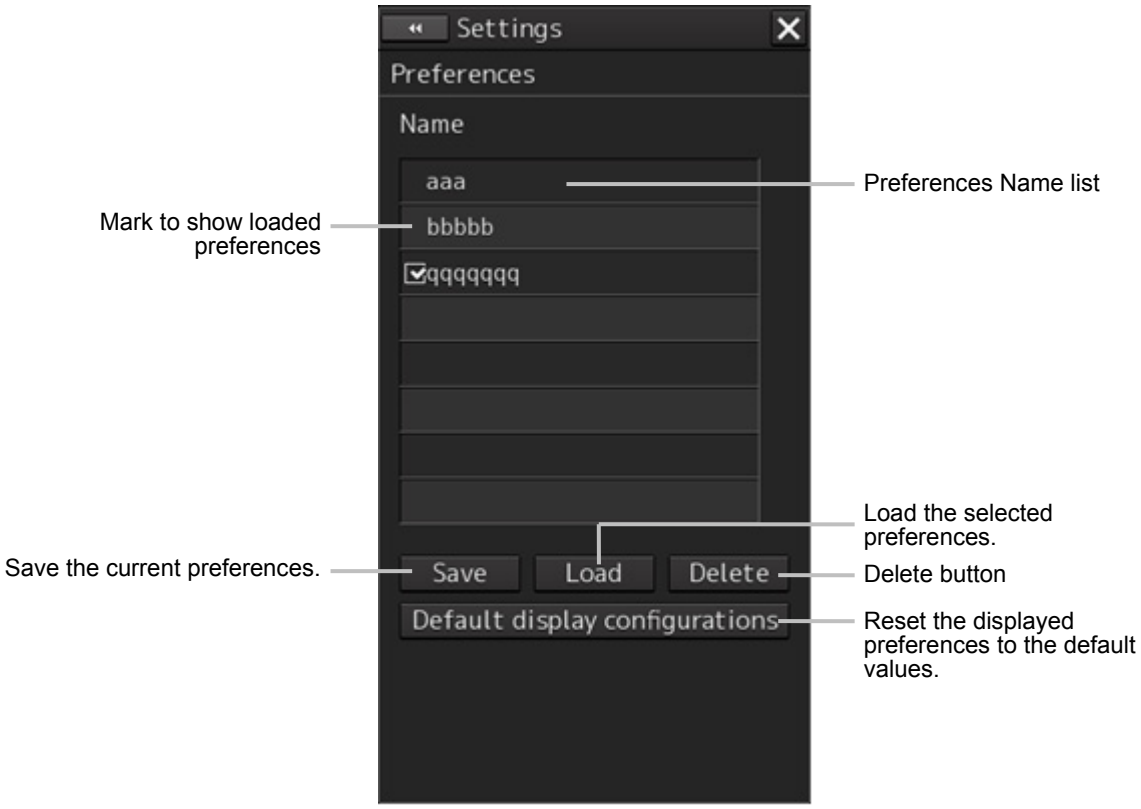
Setting Item	Description of Setting	Setting Value
[User Keys] tab		
DISP Off Key	Select a function to assign to the DISP Off key on the operation unit. [DISP Off Key] is displayed only when the optional operation unit is installed. It will be displayed neither on the CONNIG screen nor on the AMS screen.	-
User Key 1	Select a function to assign to the [USER1] key on the operation unit. [User Key 1] is displayed only when the optional operation unit is installed.	Show Preset Menu Zoom Capture Screen Show Chart
User Key 2	Select a function to assign to the [USER2] key on the operation unit. [User Key 2] is displayed only when the optional operation unit is installed.	Show Preset Menu Zoom Capture Screen Show Chart

Setting Item	Description of Setting	Setting Value
[Multi Dial] tab		
Vector Time	When this is selected, the vector length setup function will be manipulated with the [MULTI] control. This item is displayed on both the RADAR screen and the ECDIS screen.	To enable: Select. To disable: Clear.
Trails Length	When this is selected, the radar trail length setup function will be manipulated with the [MULTI] control. This item is displayed on the RADAR screen.	To enable: Select. To disable: Clear.
C UP Angle	When this is selected, the course adjustment function in the course-up mode will be manipulated with the [MULTI] control. This item is displayed on both the RADAR screen and the ECDIS screen.	To enable: Select. To disable: Clear.
Own Track Color	When this is selected, the own ship track color switch function will be manipulated with the [MULTI] control. This item is displayed on both the RADAR screen and the ECDIS screen.	To enable: Select. To disable: Clear.
Manual Tune	When this is selected, the manual tuning function will be manipulated with the [MULTI] control. This RADAR screen items are displayed. This item is not displayed in the Slave (sub-display) mode, however.	To enable: Select. To disable: Clear.
Display Brightness	When this is selected, the display brightness adjustment function will be manipulated with the [MULTI] control. It cannot be changed since power is always on.	Always enabled.
Panel Brightness	When this is selected, the operation unit brightness adjustment function will be manipulated with the [MULTI] control. This item is always displayed.	To enable: Select. To disable: Clear.
Gain	When this is selected, the gain adjustment function will be manipulated with the [MULTI] control. When the RADAR function can be used, the item will be displayed.	To enable: Select. To disable: Clear.
Sea	When this is selected, the sea adjustment function will be manipulated with the [MULTI] control. When the RADAR function can be used, the item will be displayed.	To enable: Select. To disable: Clear.
Rain	When this is selected, the rain adjustment function will be manipulated with the [MULTI] control. When the RADAR function can be used, the item will be displayed.	To enable: Select. To disable: Clear.

Setting Item	Description of Setting	Setting Value
[AZ Key] tab		
AZ 1	When this is selected, AZ1 can be turned On/Off by pressing the [AZ] key. All checked items can be turned On/Off at once by pressing the [AZ] key.	To enable: Select. To disable: Clear.
AZ 2	When this is selected, AZ2 can be turned On/Off by pressing the [AZ] key. All checked items can be turned On/Off at once by pressing the [AZ] key.	To enable: Select. To disable: Clear.

18.21 Setting Preferences Information

Select [Preferences] in the classification pane.
The main operation/setting information relating to each task of RADAR and ECDIS can be stored and called collectively.

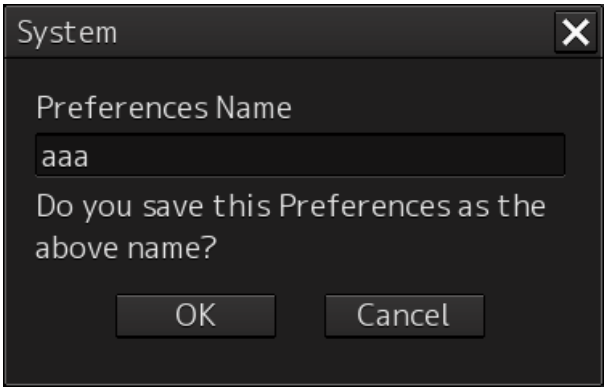


A maximum of 10 preferences names are displayed in the Preferences Name list. If all the file name characters do not fit in the display area, the remaining file name characters will be displayed with an abbreviation symbol (...).

To save a preferences

1 Click on the [Save] button.

The confirmation dialog box appears.



2 Enter a preferences name, and then click on the [OK] button.

The current preferences are saved.

A maximum of 64 characters can be entered for a file name. If all the file name characters do not fit in the display area, the remaining file name characters will be displayed with an abbreviation symbol (...).

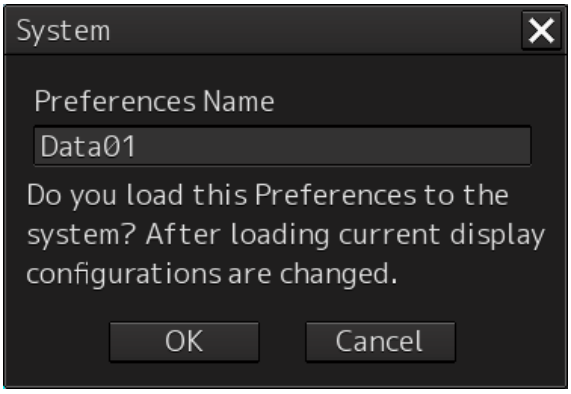
To cancel saving, click on the [Cancel] button.

When saving is completed, an item is added to a blank line in the Preferences Name list.

To load preferences

1 Select the name of the preferences you want to load, and then click on the [Load] button.

The confirmation dialog box appears.



2 Click on the [OK] button.

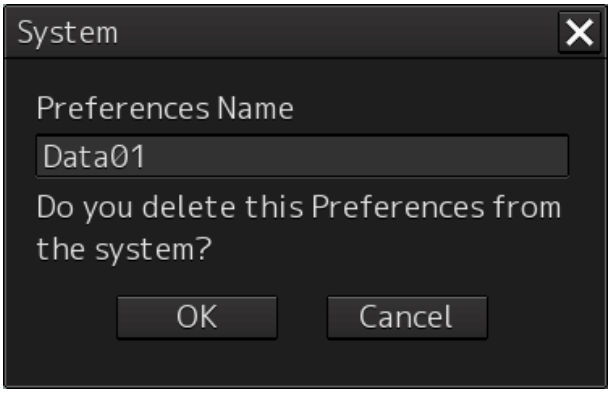
The selected preferences are loaded.

A maximum of 64 characters can be entered for a file name. If all the file name characters do not fit in the display area, the remaining file name characters will be displayed with an abbreviation symbol (...).

To cancel loading, click on the [Cancel] button.

To delete preferences

1 Select the name of the preferences you want to delete, and then click on the [Delete] button.



The confirmation dialog box appears. A maximum of 64 characters can be entered for a file name. If all the file name characters do not fit in the display area, the remaining file name characters will be displayed with an abbreviation symbol (...).

2 Click on the [OK] button.

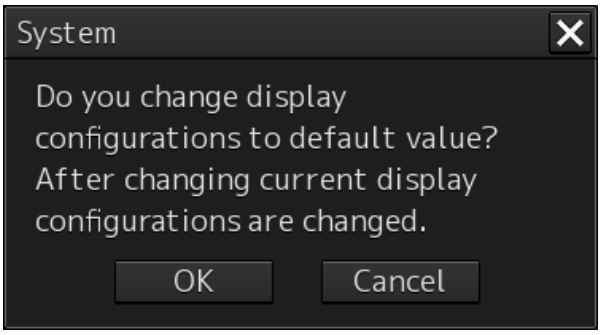
The selected preferences are deleted.

To cancel deleting, click on the [Cancel] button.

To set up default display

1 Click on the [Default display configurations] button.

The confirmation dialog box appears.



2 Click on the [OK] button.

The display configurations are changed to the default values.

To cancel changing, click on the [Cancel] button.

Items of preferences and default display configurations

The items of preferences and default display configurations are shown in the tables below.

Task "Route monitoring"

Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
Display category	ECDIS screen - Chart Information Area	Display category	Standard Display
Range	ECDIS screen - Chart Information Area	Either selection scale or selection range	Range 3 NM
Orientation	ECDIS screen - Chart Information Area	• Motion mode • Bearing mode	True motion North-up TM reset value
position sensor	Common screen - Own Ship Information or Maintenance screen - Sensor Selection	Position source	GPS *1
Past track	View - Options - Own Track (For ECDIS)	Past Track display On/Off Plot Color Track Period Time Label display On/Off Time Label Interval Past Position display On/Off Past Position Interval	Past Track display On/Off: On Plot Color: White (Black) *2 Track Period: 1h Time Label display On/Off: On Time Label Interval: 30min Past Position display On/Off: Off Past Position Interval: 0.5min
Look-ahead time	Alert - Vector/Sector	Vector function On/Off Vector Length value Vector Length unit Vector Width value Sector function On/Off Sector Radius value Sector Radius unit Sector Width value	Vector function On/Off: On Vector Length value: 6min Vector Length unit: min Vector Width value: 30m Sector function On/Off: On Sector Radius value: 1.0NM Sector Radius unit: NM Sector Width value: 45.0°
Area Boundary	View - Options - Chart Common	Area boundary	Symbolized

Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
Depth	View - Options - Chart Common	• Shallow Contour • Safety Depth • Safety Contour • Deep Contour • Two Color Depth • Shallow Pattern • Show Isolated Danger In Shallow Water	• Shallow Contour: 5 • Safety Depth: 10 • Safety Contour: 30 • Deep Contour: 30 • Two Color Depth: Off • Shallow Pattern: Off • Show Isolated Danger In Shallow Water: Off
Chart Symbol	View - Options - Chart Common	• Chart Symbol • Full Light Line • Consider Scale Minimum	• Chart Symbol: Paper Chart • Full Light Line: Off • Consider Scale Minimum: Off
Display of charts	View - Options - Chart View (ECDIS)	View1 • Chart Type • Text Size • Layer (Each item) • Text (Each item) View2 • Chart Type • Text Size • Layer (Each item) • Text (Each item)	View1 • Chart Type: S-57 • Text Size: 5 Layer: All On except [S]unknown object and [A]Nautical publication information Text: All Off except Nature of seabed and Height of islet or land feature View2 • Chart Type: S-57 • Text Size: 5 • Layer: All On except [S]unknown object and [A]Nautical publication information • Text: All On

*1 GPS when there is only one GPS

*2 White/Black interchanges under the following conditions.

RADAR screen: Constantly White

ECDIS screen: In Day1/Day2 (or Day), Black, in Day3/Dusk/Night, White

Task "Collision avoidance"

Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
Gain and anti-clutter functions	RADAR screen - Radar signal information	• Reception sensitivity adjustment value (Gain) • Sea clutter adjustment value (Sea) • Sea clutter rejection mode • Rain/snow clutter adjustment (Rain) • Rain/snow clutter rejection mode	• Reception sensitivity adjustment value (Gain): 80 • Sea clutter adjustment value (Sea): 50 • Sea clutter rejection mode: MAN • Rain/snow clutter adjustment (Sea) 0 • Rain/snow clutter rejection mode: MAN
Tuning	RADAR screen - Radar system information	• Tuning mode AUTO/MAN • Fine tuning value (under MAN)	• Tuning mode AUTO/MAN: AUTO • Fine tuning value (under MAN): 0
Range	RADAR screen - Presentation mode information	• Range scale	6NM
Fixed rings	RADAR screen - Presentation mode information	• Range rings display On/Off	On
VRMs	RADAR screen - EBL/VRM read information area	VRM1 (VRM2) • Display On/Off • Control right • Distance value • EBL1/VRM1 measurement reference point (blank space/C/D and floating position. In the case of C, the information is stored in the form of DC coordinate and in the case of D, the information is stored in the form of latitude/longitude.) • Unit of VRM distance (commonly applied to both VRM1 and VRM2)	VRM1: • Display On/Off: On • Control right: On • Distance value: 0.25NM • EBL1/VRM1 measurement reference point: Blank space (CCRP) VRM2: Display Off • Unit of VRM distance: NM

Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
EBLs	RADAR screen - EBL/VRM read information area	RADAR screen - EBL/VRM read information area EBL1 (EBL2) • Display On/Off • Control right • Bearing value • EBL bearing True/Relative (commonly applied to both EBL1 and EBL2)	EBL1 • Display On/Off: On • Control right: On • Bearing value: 000.0 • EBL bearing True/Relative: True
Parallel index lines	RADAR screen - PI (Parallel Index)	RADAR screen – PI (Parallel Index) • Display On/Off • Control right PI measurement reference point (blank space/C/D and floating position. In the case of C, the information is stored in the form of DC coordinate and in the case of D, the information is stored in the form of latitude/longitude.)	• Display On/Off: On • Control right: Off • Bearing value: 0° • Interval: 0.5NM Display for All Lines: On Mode: All Unit: NM Operation Area: One Side Floating: Off Heading Link: Off Reference Bearing: True
Display mode of the radar picture	RADAR screen - Presentation mode information	• Motion mode • Bearing mode	True motion North-up TM reset position
Stabilization Sea/Ground	RADAR screen - Presentation mode information	• Stabilization mode (combo box)	GND
Off-centring	RADAR screen - Presentation mode information	• Off-Centre button→Off-Center On/Off status and Off-Center DC position	Off-center: Off=On center
Target trails	RADAR screen - Other ship's information	• Trail true/relative • Trail length	• Trail true/relative: True • Trail length: 6min
Past positions	RADAR screen - Other ship's information	• Past POSN	Off

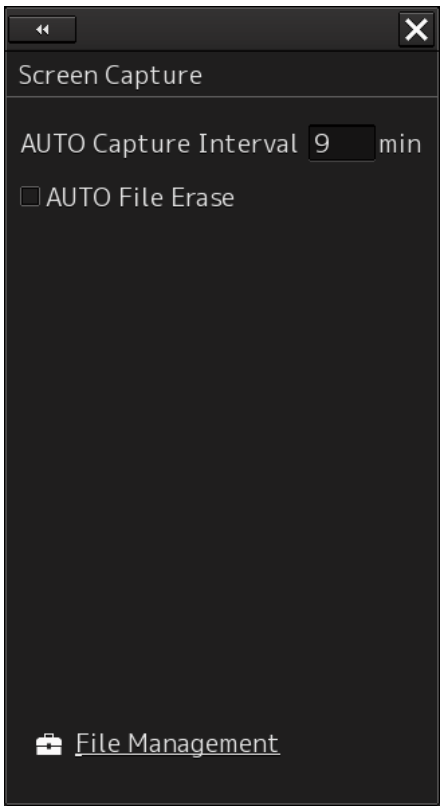
Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
Vector mode	RADAR screen - Other ship's information	• Vector/past position true/relative	Relative
Vector time	RADAR screen - Other ship's information	Vector Length	6min
Automatic radar target acquisition	Alert - New Target Alarm	• AZ1 function On/Off • AZ1 Start Angle value • AZ1 End Angle value • AZ1 Start Distance value • AZ1 End Distance value • AZ2 function On/Off • AZ2 Start Angle value • AZ2 End Angle value • AZ2 Start Distance value • AZ2 End Distance value	• AZ1 function On/Off: Off • AZ1 Start Angle value: 315.0° • AZ1 End Angle value: 045.0° • AZ1 Start Distance value: 3.00NM • AZ1 End Distance value: 3.50NM • AZ2 function On/Off: Off • AZ2 Start Angle value: 135.0° • AZ2 End Angle value: 225.0° • AZ2 Start Distance value: 3.00NM • AZ2 End Distance value: 3.50NM
Graphical AIS reported target display	View - Options - Target	• AIS Symbol display On/Off	• AIS Symbol display On/Off: On
Radar and AIS Target fusion	Settings - TT/AIS - Association	• Association function On/Off	On
Collision warning	RADAR screen - Other ship's information (Vector/Past POSN/Limit/Trails)	• CPA limit • TCPA limit	• CPA limit: 2.0NM • TCPA limit: 12min

Item saved	Preferences save target		Factory setting value, value when Default display configurations button is pressed
	Location	Item	
Display of charts	View - Options - Chart View (RADAR)	• Primary Chart INFO. Set display On/Off • Coastline display On/Off • Safety Contour display On/Off • Dangers To Navigation display On/Off • Fixed and Floating Aids to Navigation display On/Off • Land Area display On/Off • Depth Contour display On/Off • Text display On/Off • Other Objects display selection	• Primary Chart INFO. Set display On/Off: Off • Coastline display On/Off: On • Safety Contour display On/Off: On • Dangers To Navigation display On/Off: On • Fixed and Floating Aids to Navigation display On/Off: On • Land Area display On/Off: Off • Depth Contour display On/Off: Off • Text display On/Off: Off • Other Objects display selection: Off

18.22 Setting Screen Capture

Select [Screen capture] in the classification pane.

Set the screen capture in the setting dialog of the edit pane.



Setting Item	Description of Setting	Setting Value
AUTO Capture Interval	Set up the interval at which the Screen Capture dialog box is automatically saved. If this is set to 0, the Screen Capture dialog box will not automatically be saved.	0 to 999 min
AUTO File Erase	Specify whether or not to delete the screen shot file automatically.	To enable: Select. To disable: Clear.

Shortcut	Settings Dialog Box
File Management	"File Management" dialog box

アスベストは使用しておりません
Not use the asbestos

CODE No.7ZPNA4447A

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