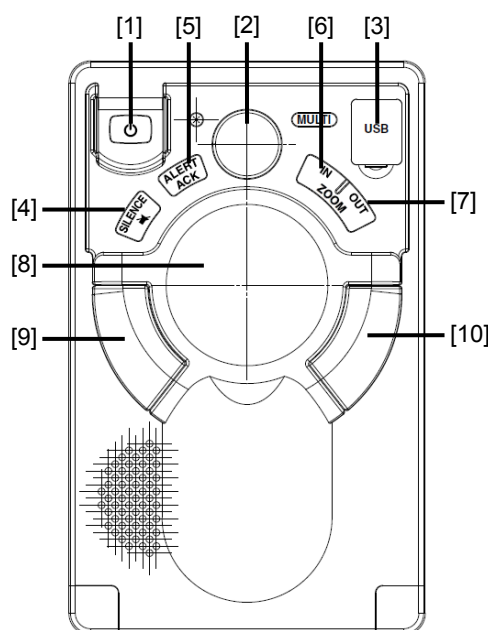


Section 2 Name and Function of Each Unit

2

2.1 Name and Main Function of the Operation Unit

2.1.1 Trackball operation unit



WARNING

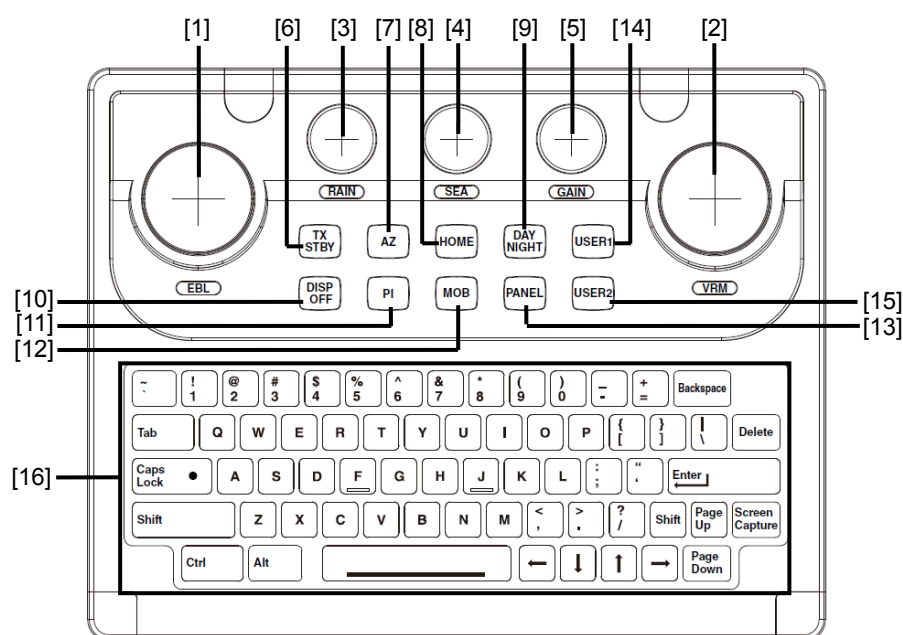


When turning off the power supply, do not hold down the power button of the operation unit.
Otherwise, a trouble may occur due to termination failure.

No.	Name	Function outline
1	Power supply button	Use this button to turn on and off this equipment.
2	[MULTI] dial	• Turn this dial to operate the function that is assigned to the [MULTI] dial such as the Display Brightness function. • If the [MULTI] dial is held down, the Display Brightness function is assigned to the [MULTI] dial forcibly.
3	USB terminal	Connects a USB flash memory.
4	[SILENCE] key	Stops the alert buzzer.
5	[ALERT ACK] key	Acknowledging the alert.
6	[ZOOM IN] key	• "Observation range" Setting will increment one step smaller in the case of RADAR. • "Scale" Setting will increment one step larger in the case of ECDIS. • When this key is held pressed, setting will step continuously until released.

No.	Name	Function outline
7	[ZOOM OUT] key	• "Observation range" Setting will increment one step larger in the case of RADAR. • "Scale" Setting will increment one step smaller in the case of ECDIS. • When this key is held pressed, setting will step continuously until released.
8	Track ball	Moves the cursor on the screen. Use the track ball to specify a position or to perform various settings.
9	Left button	• Use this button to select a function or determine the operation that is set. • The clicking of the left button once is referred to as "click" in this manual. • The clicking of the left button twice consecutively is referred to as "double click" in this manual.
10	Right button	• Use this button to select a function or perform setting operation. • The clicking of the right button is referred to as "right click" in this manual.

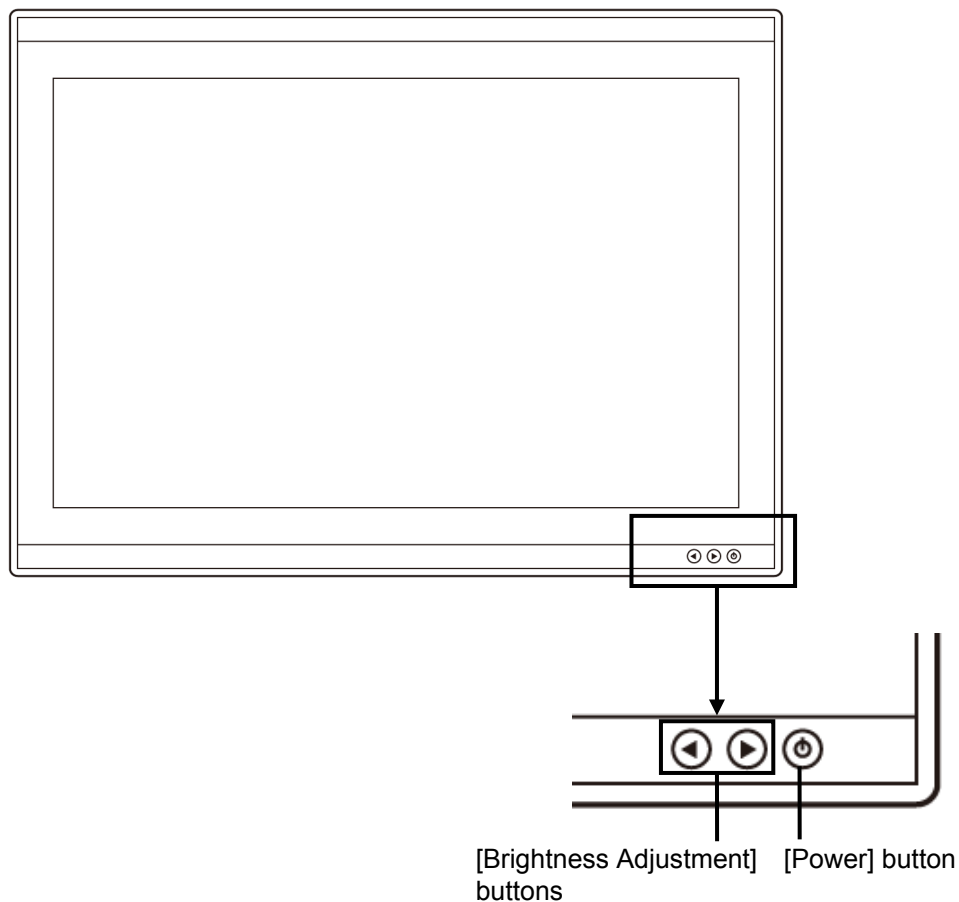
2.1.2 Keyboard operation unit (Option)



No.	Name	Function outline
1	[EBL] dial	When this dial is turned, control moves in the EBL (PI) direction with control right. This dial also moves the cursor horizontally (in cursor move mode).
2	[VRM] dial	When this dial is turned, control moves in the VRM (PI) direction with control right. This dial also moves the cursor vertically (in cursor move mode).
3	[RAIN] dial	• When this dial is turned, the level of rain/snow clutters on the radar image is adjusted. • When this dial is pressed, the function mode is switched to manual/automatic.
4	[SEA] dial	• When this dial is turned, the level of sea clutters on the radar image is adjusted. • When this dial is pressed, the function mode is switched to manual/automatic.
5	[GAIN] dial	• When this dial is turned, the gain of the radar image is adjusted. • When this dial is pressed, the transmission pulse width is switched.
6	[TX STBY] key	[For RADAR] • When this dial is pressed, the radar transmission status is switched to Standby or Transmit. [For ECDIS] When this dial is pressed, the radar image on the chart is switched to "On" or "Off".
7	[AZ] key	• This key switches AZ to On/Off. • When this key is held down, the "[AZ] Key Assignment" dialog box appears.

No.	Name	Function outline
8	[HOME] key	• Returns own ship to the home position within the display screen. - TM: Moves the own ship to the TM RESET position. - RM: Moves the own ship to the on-center position (when it is at off-center only).
9	[DAY NIGHT] key	Switches the display color on the screen over 5 levels according to the brightness on the bridge.
10	[DISP OFF] key	The assigned function is executed while the key is pressed. The function that can be assigned is Data Off or HL Off for RADAR and Data Off for ECDIS.
11	[PI] key	• Switches the PI operation/display to On/Off. For PI operation, refer to "4.6 Using Parallel Index Lines (PI)". • When this key is held down, the cursor mode is changed to the floating PI mode.
12	[MOB] key	• Displays the MOB symbol and the setting dialog box in the own ship's position latitude/longitude. • When this key is held down, the MOB symbol and the setting dialog box are cleared.
13	[PANEL] key	Whenever this key is pressed, the brightness of the panel on the operation unit is switched.
14	[USER1] key	• Executes the function that is assigned to the key. • When this key is held down, the setting dialog box of the function that is assigned to the [USER1] key appears.
15	[USER2] key	• Executes the function that is assigned to the key. • When this key is held down, the setting dialog box of the function that is assigned to the [USER2] key appears.
16	Keyboard	The keyboard is used for input of numeric values and characters at operation of this equipment.

2.1.3 Display unit



[Power] button

When the Power button is pressed while the power of the display unit is turned off, the power is turned on.

To turn off the power of the display unit, press the Power button for 5 seconds or longer.

[Brightness Adjustment] buttons

These buttons are used to adjust the brightness of the screen.

The screen increases brightness by pressing the ► button.

The screen decreases brightness by pressing the ◀ button.

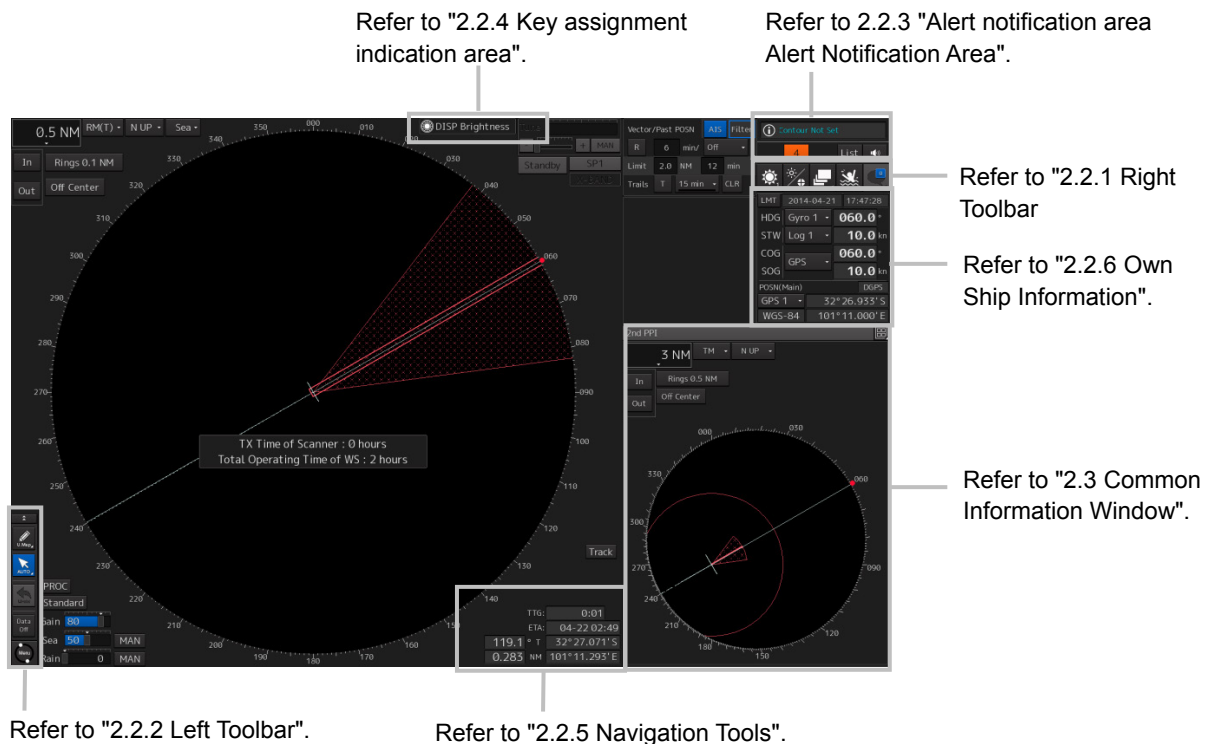
Memo

Adjust the brightness of the screen to the extent it is not dazzling, taking into account the brightness of the surroundings and to the brightness which you can be easily observed the RADAR, the ECDIS screens.

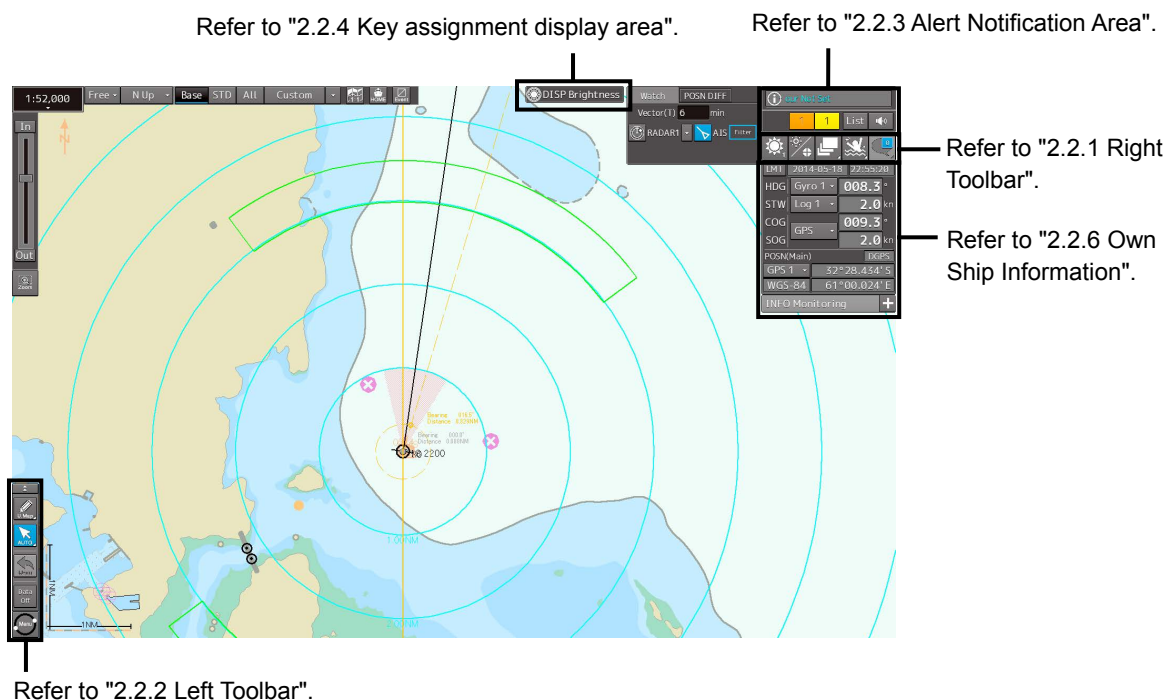
2.2 Names and Main Functions of the Task Screen Common Sections

2

This section describes the names of task screen common sections and outlines the main functions.



Display Example on the RADAR Screen



Display Example on the ECDIS Screen

2.2.1 Right Toolbar

The functions of the buttons of the right toolbar are as follows.

Day/Night button

The display color on the screen can be switched to 5 levels according to the brightness on the bridge.

For the details, refer to "3.8 Switching the Day/Night Mode".

Message notification button

When this button is clicked on, the message dialog box relating to the latest notification message is displayed among the information received on AIS MSG Tray.

For the message dialog box of each of the information received, refer to "2.3.2 Information reference windows".

The total number of unread messages is displayed on the badge.

Display and Panel Brightness button

The brightness of the screen and operation unit can be switched within the range from 0 to 100.

For the details, refer to "3.9 Adjusting the Brightness of the Screen and Operation Unit".

MOB (Man Over Board) button

When a person falls overboard, use this button to mark the own ship's position when the button is clicked on, so as not to lose the sight of the position.

For the details, refer to "3.10 MOB (Man Over Board)".



Task switching button

This button switches the task screen.

- When the button is clicked on, task switching thumb nails are displayed to enable selection of a task screen.



- When one of the thumb nails on the dialog box is clicked on, the screen is switched to the applicable task screen.

Memo

The first letter of the task screen that is currently displayed is displayed on the task switching button.

RADAR: R

ECDIS: E

Conning Display: C

AMS: A

Example: ECDIS is displayed.

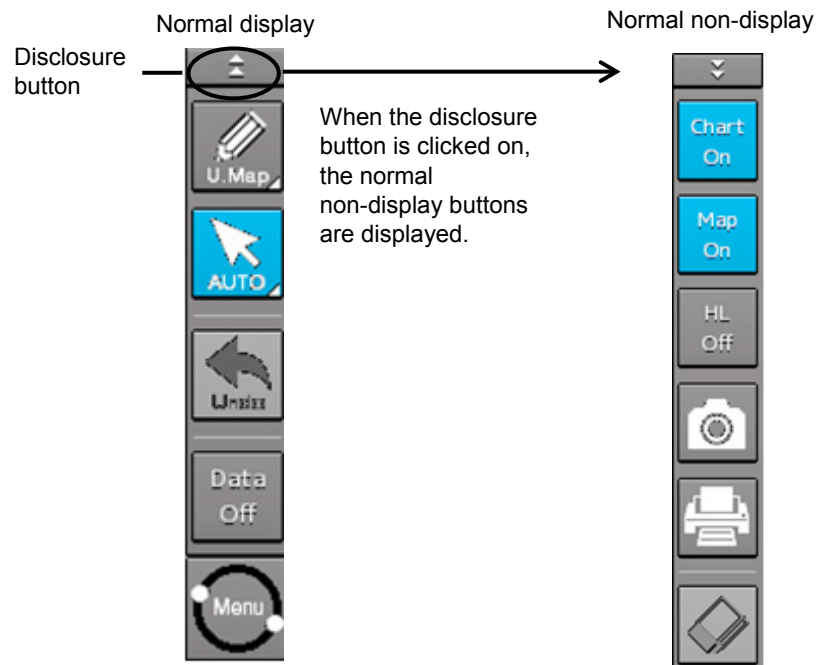


2.2.2 Left Toolbar

The functions of the buttons of the Left Toolbar are as follows.

Some buttons on the Left Toolbar are normally displayed and others are not.

Click on the Disclosure button to switch the display.



Refer to the next page for the name and function of each button.

2.2.2.1 Buttons that are normally displayed

PEN (Write tool) button

Clicking on this button during user map creation, manual chart update or route planning brings up the corresponding operation mode.

The mode name will be indicated on the button.



Example: [U.Map] (User Map) mode

[U. Map] (User Map) mode

Clicking on the button when it indicates [U. Map] displays the drawing toolbar for user maps.

*When this mode is used, the azimuth mode will be fixed to N UP (North UP).

[Update] (Manual Update) mode

Clicking on the button when it indicates [Update] displays the "Select Chart" dialog box if a chart to be manually updated has not been selected. If a chart to be manually updated is selected, the drawing toolbar for manual update will be displayed.

*When this mode is used, the azimuth mode will be fixed to N UP (North UP).

[Route] (Route Planning) mode

Clicking on the button when it indicates [Route] brings up a new route planning mode if no route planning tab is open. If one or more route planning tabs are open, the system switches from the end of the routes currently being created to the WPT addition mode.



[Auto] (Cursor mode selection) button

When this button is clicked on, the cursor mode is switched to the AUTO mode. For the details of the cursor mode, refer to "3.12 Cursor AUTO Mode".

[Undo] button

Clicking on this button cancels the previous operation performed.

- In user map creation mode
- In manual update creation mode

[Data OFF] button

When this button is clicked on, only the main information is displayed from the screen display and other information is hidden.

The following information items are displayed:

RADAR

- Echo/trail
- Cursor

ECDIS

- Own ship's symbol
- Route
- Temporary Route
- Chart
- Manual update object
- EBL
- VRM
- Cursor

*The chart is displayed when the display category is [Base].

[Menu] button

When this button is clicked on, the top menu for the RADAR and ECDIS screens is displayed.

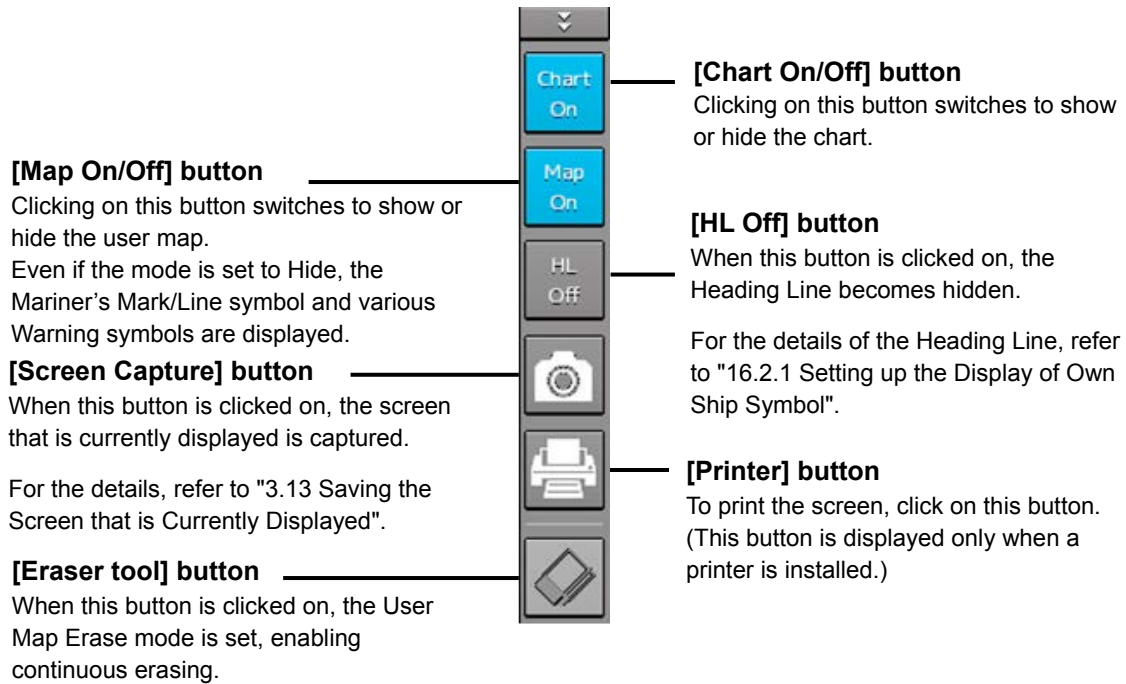
For the details of the menu, refer to "3.4 Basic Menu Operations".

Memo

This equipment is operating normally when the [Menu] button is moving in animation mode.

When this equipment is set to a freeze state, the Menu button stops and does not move. In this case, turn off the power once and turn it on again.

2.2.2.2 Buttons that are normally hidden



2.2.3 Alert notification area

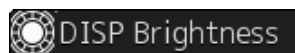
When an alert occurs, the alert status, the contents of the alert and the occurrence count are displayed in the alert notification area.



For the details, refer to "3.7 Confirming and Acknowledging an Alert".

2.2.4 Key assignment indication area

When the [MULTI] dial is turned, the assigned functions are operated.



For the function assignment, refer to "3.14 [Multi] dial".

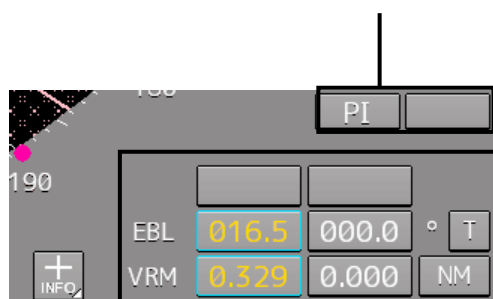
2.2.5 Navigation tools

The tools that are used for measurement are displayed.

[PI] button

Use this button to operate the parallel index line cursor.

For the details, refer to "4.6 Using Parallel Index Lines (PI)".



EBL/VRM operation button area

Use this button to operate EBL/VRM.

For the details, refer to "4.5.1 Measuring a range and a bearing with EBL and VRM"

[Cursor] (Cursor information display) button

When this button is clicked on, the "Cursor Readout" dialog box appears.

For the details, refer to "4.3 Using the Cross-hair Cursor".

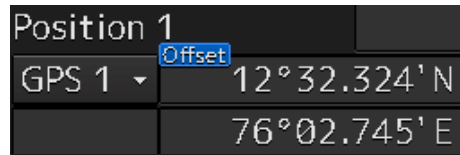
2.2.6 Own Ship Information



Do not use the offset function during navigation.

If the equipment is used with the offset value entered as the own ship position (deviated from the actual position), accidents may result.

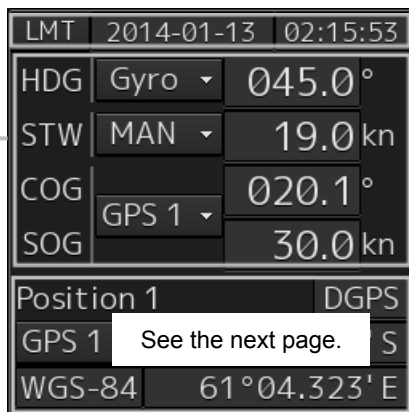
When the offset values are entered, the [Offset] badge is displayed at the position display on the Own Ship Information. Check the indication, and cancel the offset function if necessary. Also, the message "Position Shift" is displayed in the message display area.



This window displays the own ship's information.



- When using 1-axis log, heading speed component can be detected, but transverse speed component cannot be detected. Then leeway effect (component drifted by wind) cannot be detected.
- When using 2-axes log, its accuracy in shallow waters may be deteriorated, and its speed in deep sea areas may be unable to be detected.
- When using a GPS, COG accuracy is less than $\pm 3^\circ$ at speed: from 1kn to 17kn, and is less than $\pm 1^\circ$ at speed: more than 17kn.



UTC/Local date and time

This button displays the current date and time.

- When the button is clicked on, the time can be switched to the UTC time display or Local time display.
- Set the time format by selecting [Maintenance] - [Date/Time/Time Zone]-[Display Style] on the menu.

For the details, refer to "21.1.2 Setting Date/Time/Time Zone".

Sensor information

Various sensor information items are displayed.

[Sensor types]

Sensor name	Contents
HDG	Displays the value indicated by the ship's heading sensor.
STW	Displays the value indicated by the speed through water sensor.
COG/SOG	Displays the value indicated by the speed over the ground sensor.

[Sensor value background colors]

Each background color represents the following meaning.

Normal color: Normal sensor value

Yellow: The reliability of the sensor value is deteriorating.

Red: The sensor value is abnormal.

[Switching the sensor source]

LMT	2014-01-13	02:15:53
HDG	Gyro ▾	045.0°
STW	MAN ▾	19.0 kn
COG	GPS 1 ▾	020.1°
SOG		30.0 kn

Select the sensor source in the [Source] combo box. The following sensor sources can be selected.

When [Menu] is selected, the "Sensor Selection/Status" dialog is displayed.

Sensor name	Sensor source
HDG	MAN (Manual) ^{*4} , Gyro, Gyro 1 ^{*1*5} , Gyro 2 ^{*1*5} , MAG (MAG Compass) ^{*5} , G/C (GPS Compass)
STW	MAN (Manual) ^{*4} , Log, Log 1 ^{*2} , Log 2 ^{*2}
COG	Log, Log 1 ^{*2} , Log 2 ^{*2} , GPSx ^{*3}
SOG	

*1: Only when there are two Gyros.

*2: Only when there are two Logs.

*3: When two or more GPS units are present, "x" indicates the unit number.

*4: This can only be selected from the "Sensor Selection/Status" dialog.

*5: When the Gyro Compass system that is used has the automatic switching function, the display of the sensor source changes automatically according to the switching condition.

LMT	2014-01-13	02:15:53
HDG	Gyro ▾	045.0°
STW	See the previous page.	
COG	GPS 1 ▾	020.1°
SOG		30.0 kn
Position 1 DGPS		
GPS 1 ▾	32°26.353' S	
WGS-84	61°04.323' E	

Position

Displays Position information.

[1] —	Position 1	DGPS	[4]
[2] —	GPS 1 ▾	32°26.353' S	[5]
[3] —	WGS-84	61°04.323' E	

[1] The data name of the Position is displayed.

[2] The sensor source of the Position is displayed.

Select a sensor source in the [Source] combo box. Any of the following sensor sources can be selected. When [Menu] is selected, the "Sensor Selection/Status" dialog is displayed.

Data name	Sensor source
POSN(Main) for ECDIS and Position for RADAR	GPSx [*] , DR

*: When two or more GPS units are present, "x" indicates the unit number.

[3] A geodetic positioning system is displayed. It is fixed to "WGS-84".

[4] Positioning precision display

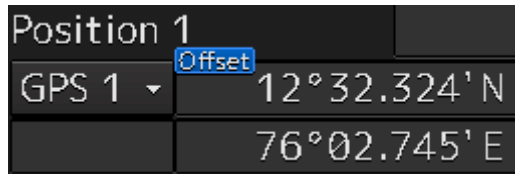
When the positioning precision is differential positioning, "DGPS" is displayed. No information is displayed in the case of GPS single positioning.

[5] Position (CCRP)

The CCRP position indicated by the primary positioning sensor is displayed.

Own ship's position offset display

When offset is set for the own ship's position, the icon that indicates the offset status is displayed for the Position.



2.3 Common Information Window

The common information window is commonly used by RADAR and ECDIS.

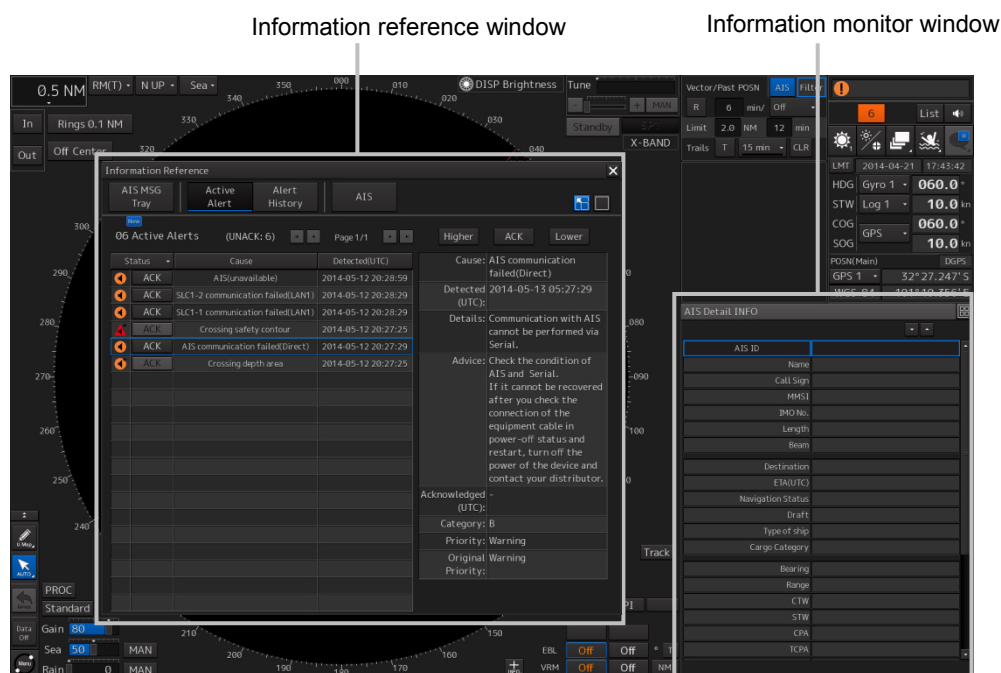
The information that is displayed on the Common Information Window can be classified into information monitoring and information referencing.

An **information monitoring** window is used together with radar PPI and a chart, and the information includes TT/AIS value information, wave information, conning blocks, etc.

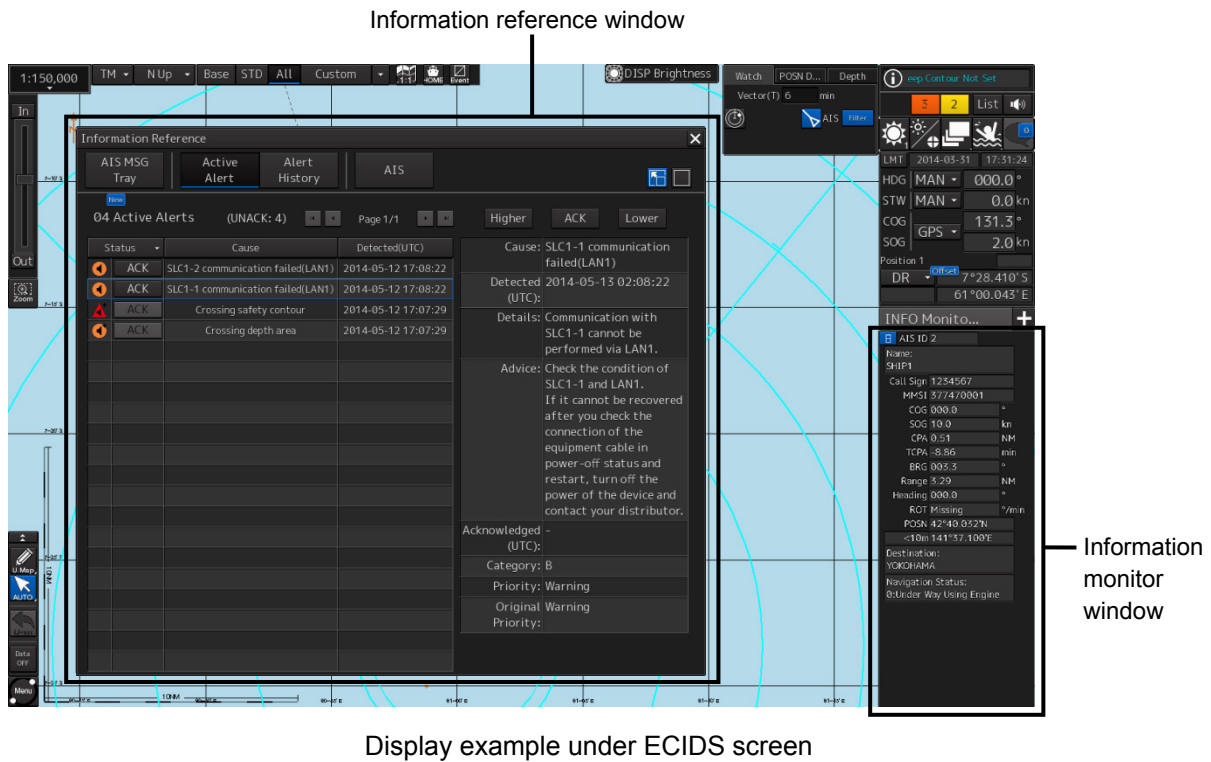
- Information monitoring windows are displayed at the bottom right corner of the screen in RADAR. In ECDIS, although the windows are displayed at the bottom right corner of the screen at the initial display, the display positions can be moved as floating windows.

The **information reference** is the window that is temporarily referenced according to the user request and the information includes AIS messages, alert information, and own ship AIS information.

- The information reference window can be switched to either the standard window display or the extended window display. For the details of the switching between the standard window and the extended window, refer to "2.3.2.1 Switching between a standard window and an extended window".



Display example under RADAR screen



Memo

This section provides the overview of each common information window.

For the operations and settings of the common information windows, refer to "3.6 Operation of the Information Monitor Window".

2.3.1 Information monitor windows

Information monitoring related windows is as follows.

Item	Contents	Related section
Target INFO	TT/AIS movement information	2.3.1.1 Target INFO
TT List (for RADAR) TT1 List, TT2 List1 (for ECDIS)	TT target risk sequence list	2.3.1.2 TT List
AIS List	AIS target risk sequence list	2.3.1.3 AIS List
AIS Detail INFO	Detail information relating one AIS target	2.3.1.4 AIS Detail INFO
2nd PPI	Radar 2nd PPI	2.3.1.5 2nd PPI
Wave Analysis (option)	Wave analysis information	2.3.1.6 Wave Analysis (option)
Current/Wind	Wind speed and current information	2.3.1.7 Current/Wind Block
Conning	Conning	2.3.1.8 Conning

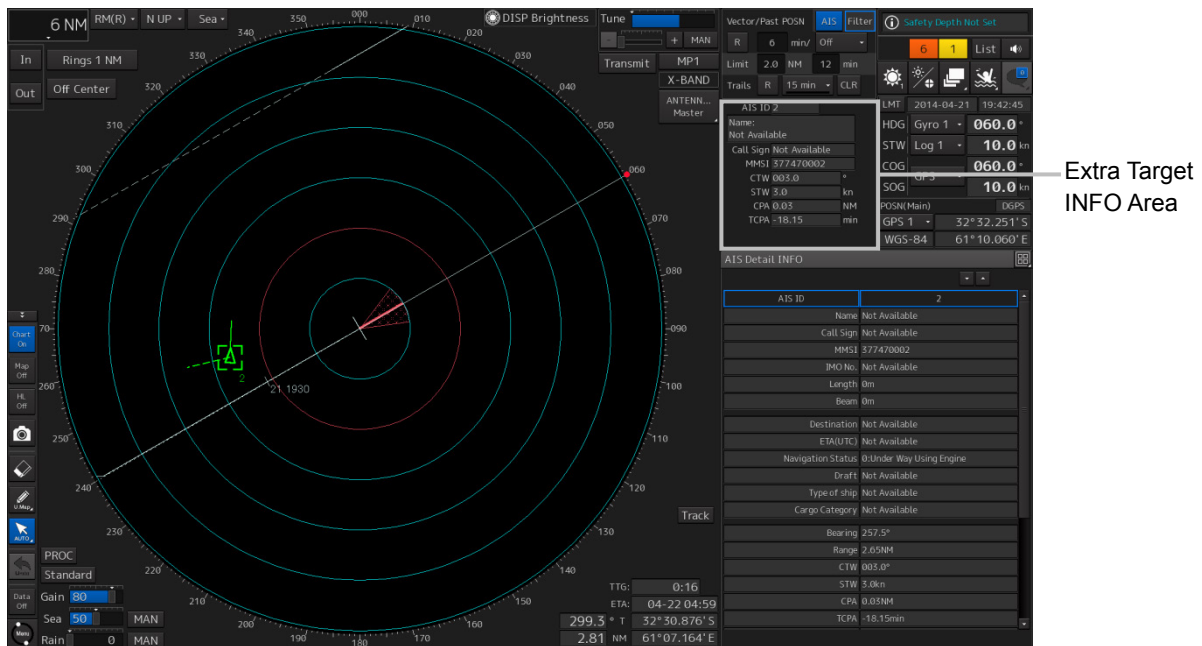
2.3.1.1 Target INFO

Target INFO is the display monitor window that displays movement information of TT/AIS.

In Target INFO, TT information, AIS information, and AIS extended information are displayed.

Memo

When the screen is a 26inch screen and the mode is the RADAR mode, Target Info is also displayed in the Extra Target INFO Area.



TT information display

TT ID	4	1
BRG	153.8	041.0 °
Range	8.84	8.48 NM
COG	012.3	028.7 °
SOG	8.7	10.1 kn
CPA	8.10	8.46 NM
TCPA	67.28	-Over min
BCR		8.70 NM
BCT		+Over min

The following information items are displayed.

Displayed information	Explanation
TT ID	Displays the identification number (1 to 100) of a TT target.
BRG	Displays the bearing of a TT target.
Range	Displays the distance to a TT target.
COG or CTW	Displays the course of a TT target. Displayed as "COG" in the course over the ground mode and "CTW" in the course through the water mode.
SOG or STW	Displays the ship speed of a TT target. Displayed as "SOG" in the speed over the ground mode and "STW" in the speed through the water mode.
CPA	Displays the distance of the closest point of approach to the TT target.
TCPA	Displays the arrival time of the closest point of approach to the TT target.
BCR	Displays the bow crossing range of a TT target.
BCT	Displays the bow crossing time of a TT target.

AIS information

AIS ID 2

Name:

SHIP1

Call Sign

1234567

MMSI

377470001

COG

000.0

°

SOG

10.0

kn

CPA

1.00

NM

TCPA

-8.56

min

Standard display

AIS ID 2

Name:

SHIP1

Call Sign

1234567

MMSI

377470001

COG

000.0

°

SOG

10.0

kn

CPA

0.51

NM

TCPA

-8.86

min

BRG

003.3

°

Range

3.29

NM

Heading

000.0

°

ROT

Missing

°/min

POSN

42°40.032'N

<10m

141°37.100'E

Destination:

YOKOHAMA

Navigation Status:

0:Under Way Using Engine

Extended display

- AIS information of the target is displayed.
- When the  (AIS standard/extension switching) button is clicked on, the display is switched between the standard display and the extended display.
- The following information items are displayed.

Displayed information	Explanation
AIS ID	Displays the identification number (1 to 1000) of an AIS target. *The maximum display number is 1000 as the option.
Name	Displays the ship name of an AIS target.
Call Sign	Displays a call sign.
MMSI	Displays a nine-digit identification number for a ship/ground station equipped with a DSC communication device.
COG or Course	Displays the course of an AIS target. Displayed as "COG" in the course over the ground mode and "Course" in the course through the water mode.
SOG or STW	Displays the ship speed of an AIS target. Displayed as "SOG" in the speed over the ground mode and "STW" in the speed through the water mode.
CPA	Displays the closest approach distance to an AIS target.
TCPA	Displays the time to reach the closest approach point to an AIS target.
BRG*	Displays the bearing of an AIS target.
Range*	Displays the distance to an AIS target.
Heading*	Displays the heading of an AIS target.
ROT*	Displays the turning speed of an AIS target.
POSN and Position Accuracy*	Displays the position of an AIS target and position-fix accuracy. When the position-fix accuracy is low, [>10m] is displayed. When the position-fix accuracy is high, [<10m] is displayed.
Destination*	Displays the destination of an AIS target.
Navigation Status*	Displays the navigation conditions of an AIS target. For detailed explanation, refer to "Navigation Status" in the table provided in "2.3.1.4 AIS Detail INFO".

*: Extended display only

AIS SART information

AIS SART information is displayed by using an extended display.

AIS ID 1	
Name:	Missing
MMSI	970470000
COG	135.7 °
SOG	0.1 kn
CPA	1.73 NM
TCPA	11.08 min
BRG	102.7 °
Range	1.77 NM
Heading	136.0 °
ROT	000.0 °/min
POSN	32°34.610'S
	<10m 61°07.234'E
Navigation Status:	
14:SART Active	

Unlike the AIS information extended display, the following items are not displayed.

- Call Sign
- Destination
-  (AIS standard/extension switching) button

For the details, refer to "6.14.2 Displaying the TT/AIS Target List".

For the details, refer to "6.14.3 AIS List".

2-20

2.3.1.4 AIS Detail INFO

This window displays detail information on one AIS target.

AIS Detail INFO

⏏

⏮ ⏭

AIS ID	3
Name	SHIPNAME-377470002
Call Sign	JRC0003
MMSI	377470002
IMO No.	Not Available
Length	0m
Beam	0m
Destination	Not Available
ETA(UTC)	Not Available
Navigation Status	0:Under Way Using Engine
Draft	Not Available
Type of ship	Not Available
Cargo Category	Not Available
Bearing	014.0°
Range	9.87NM
CTW	024.0°
STW	10.0kn
CPA	0.25NM
TCPA	-69.10min

AIS Detail INFO

⏏

⏮ ⏭

Navigation Status	0:Under Way Using Engine
Draft	Not Available
Type of ship	Not Available
Cargo Category	Not Available
Bearing	014.0°
Range	9.89NM
CTW	024.0°
STW	10.0kn
CPA	0.25NM
TCPA	-69.22min
BCR	
BCT	
Heading	024.0°
ROT	Missing
Position	32°28.385'S 61°00.864'E
Position Accuracy	<10m
Position Sensor	0:Not Defined
Status	Selected

AIS information of the target is displayed.

When either one of is clicked on, AIS information before or after the information currently displayed is displayed.

The following information items are displayed.

Displayed information	Explanation
AIS ID	Displays the identification number (1 to 1000) of an AIS target. *The maximum display number is 1000 as the option.
Name	Displays the ship name of an AIS target.
Call Sign	Displays a call sign.
MMSI	Displays a nine-digit identification number for a ship/ground station equipped with a DSC communication device.
IMO No.	Displays the 9-digit IMO number.
Length	Displays the length of an AIS target.
Beam	Displays the beam of an AIS target.
Destination	Displays the destination of an AIS target.
ETA or UTC	Displays the expected arrival time of an AIS target.

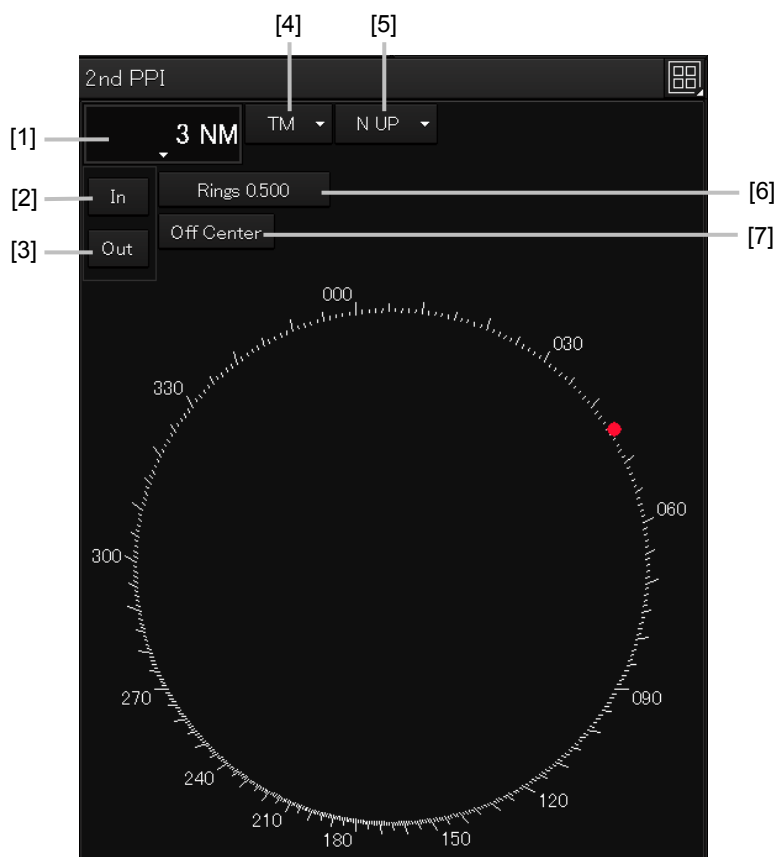
Displayed information	Explanation
Navigation Status	Displays the navigation conditions of an AIS target. 0: Under Way Using Engine 1: At Anchor 2: Not Under Command 3: Restricted Maneuverability 4: Constrained by Her Draught 5: Moored 6: Aground 7: Engaged in Fishing 8: Under Way Sailing 9: Reserved for HSC 10: Reserved for WIG 11: Reserved 15: Not Defined
Draft	Displays the draft of an AIS target.
Type of Ship	Displays the ship type of an AIS target. 30: Fishing Vessel 31: Towing Vessel 32: Towing Vessel L>200M B>25M (Towing and length of the tow exceeds 200m or breadth exceeds 25m) 33: Dredge or Underwater OPE (Engaged in dredging or underwater operation) 34: Vessel-Diving OPE (Engaged in diving operation) 35: Vessel-Military OPE (Engaged in military operation) 36: Sailing Vessel 37: Pleasure Craft 50: Pilot Vessel 51: Search and Rescue Vessels 52: Tugs 53: Port Tenders 54: With Anti-Pollution Equip(Vessels with anti-pollution facilities or equipment) 55: Law Enforcement Vessels 58: Medical Transports 59: Resolution No18:MOB-83(Ships according to Resolution No18(Mob-83)) 2X: WIG(Wing-in-Ground Effect Craft) 4X: High Speed Craft 6X: Passenger Ships 7X: Cargo Ships 8X: Tanker 9X: Other Type of Ship

Displayed information	Explanation
Cargo Category	When the setting of the type of a ship is 2X, 4X, 6X, 7X, 8X or 9X, the digit shown at the end of the code represents the cargo/condition. X1 Category X(DG/HP/MP) X2 Category Y(DG/HP/MP) X3 Category Z(DG/HP/MP) X4 Category OS(DG/HP/MP) X9 No Additional Information X0 All Ships of This Type
Bearing	Displays the bearing of an AIS target.
Range	Displays the distance to an AIS target.
COG or CSE	Displays the course of an AIS target. Displayed as "COG" in the course over the ground mode and "CSE" in the course through the water mode.
SOG or STW	Displays the ship speed of an AIS target. Displayed as "SOG" in the speed over the ground mode and "STW" in the speed through the water mode.
CPA	Displays the closest approach distance to an AIS target.
TCPA	Displays the time to reach the closest approach point to an AIS target.
BCR	Displays the bow crossing range of an AIS target.
BCT	Displays the bow crossing time of an AIS target.
Heading	Displays the heading of an AIS target.
ROT	Displays the turning speed of an AIS target.
Position	Displays the position of an AIS target and position-fix accuracy. When the position-fix accuracy is low, [$>10\text{m}$] is displayed. When the position-fix accuracy is high, [$<10\text{m}$] is displayed.
Position Sensor	Displays the type of the position sensor used by an AIS target. 0: Not Defined 1: GPS 2: GLONASS 3: Combined GPS/GLONASS 4: Loran-C 5: Chayka 6: Integrated Navigation System 7: Surveyed 8: Galileo 15: Internal GNSS
Status	Status of an AIS target • Sleeping • Activated • Lost • Danger • Selected

2.3.1.5 2nd PPI

The setting items are the same as those of the main PPI setting except for the setting items that can be specifically set under 2nd PPI.

For the details, refer to "2.4.1 Presentation and mode information".



Note

In "screen fixed display" (C mode), EBL/VRM is not displayed in the 2nd PPI.

Memo

When the numbers of the direction graduations become overlapped and cannot be distinguished, the numbers will be thinned out and displayed.

[1] Range scale combo box

Select a range scale from the combo box and set up the range scale.

[2] [In] (Zoom In) button

When this button is clicked on, the display is zoomed in by one level from the range scale. When the button is held down, the display is zoomed in continuously.

[3] [Out] (Zoom Out) button

When this button is clicked on, the display is zoomed out by one level from the range scale. When the button is held down, the display is zoomed out continuously.

[4] Motion mode combo box

Select a motion mode from the combo box and set up the motion mode. The mode operates by linking with the setting of the main PPI.

[5] Bearing mode combo box

Select a bearing mode from the combo box and set up the bearing mode. The mode operates by linking with the setting of the main PPI.

[6] Range rings display button

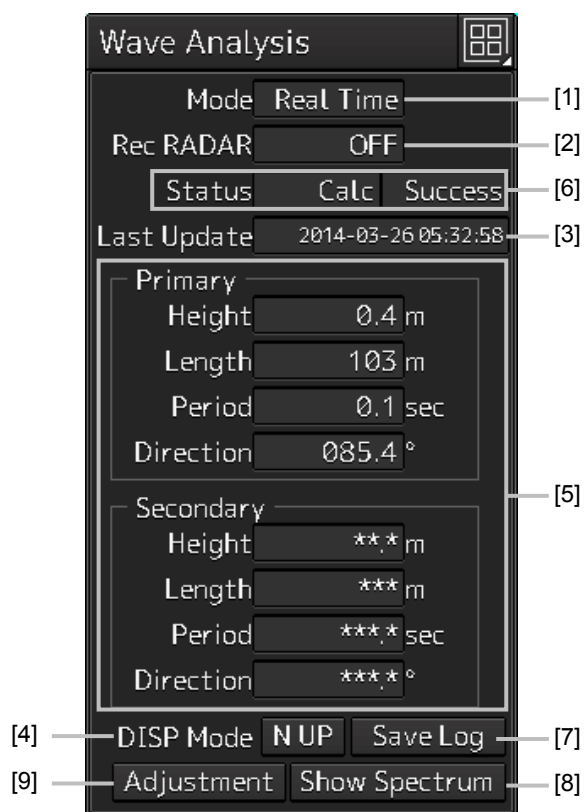
When this button is clicked on, the range rings display surrounding the own ship is set to On/Off.

[7] [Off Center] button

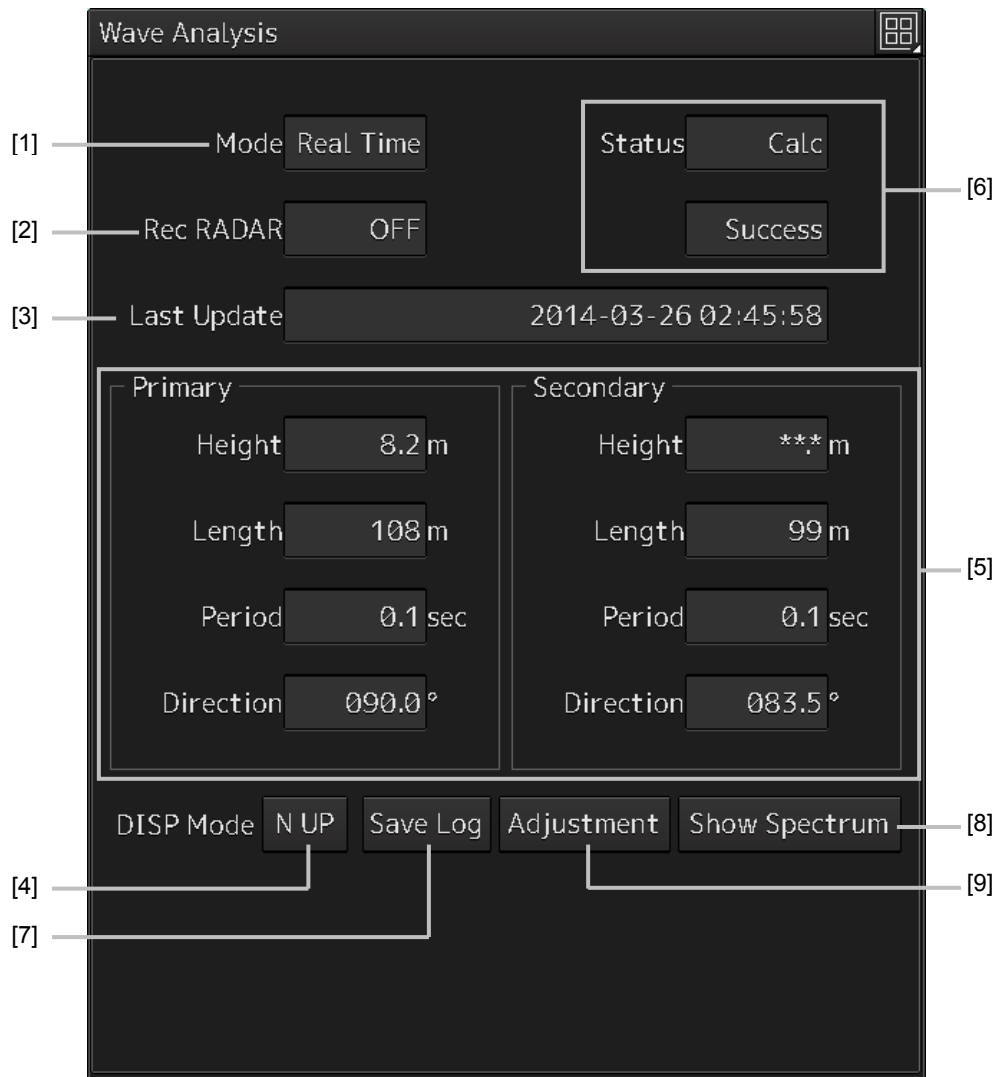
When this button is clicked on, the off-center of the own ship's position (CCRP) is set to On/Off.

2.3.1.6 Wave Analysis (option)

Wave Analysis analyzes sea clutters that are detected by a radar and measures the wave height, wave direction, cycle and wave length around own ship.



19inch screen



26inch screen

[1] [Mode] (Calculation execution mode)

The calculation execution mode is displayed. Three modes are available, [Real Time], [Interval] and [Display].

- [Real Time] mode: Outputs analysis results at a 1-minute interval.
- [Interval] mode: Outputs analysis results at the set interval (5 to 120 minutes).
- [Display] mode: Displays the latest analysis result. Analysis is not performed.

[2] [Rec RADAR] (Recording radar data log)

Displays whether the recording of radar data log is set to ON or OFF.

Radar echo data that is received from a sensor at the cycle of 2.4 seconds is saved in the png format (about 100KB/sheet) and inf file (about 1KB/sheet) as the log. The storing period can be set within the range from 1 to 300 days.

[3] [Last Update] (Analysis time)

Displays the time when the last analysis was performed.

Memo

The time is displayed in the format that was set in [Display Style] after selecting [Maintenance] - [Date/Time/Time Zone] on the menu.

[4] [DISP Mode] button

Select a display mode of the wave direction.

When displaying in North Up, set [N UP] by clicking on the button.

When displaying in Head Up, set [H UP] by clicking on the button.

[5] Analysis result

Displays the analysis result.

[Height] (wave height), [Length] (wave length), [Period] (wave cycle), and [Direction] (wave direction) are displayed for each Primary (primary waves) and Secondary (secondary waves) that come from multiple directions.

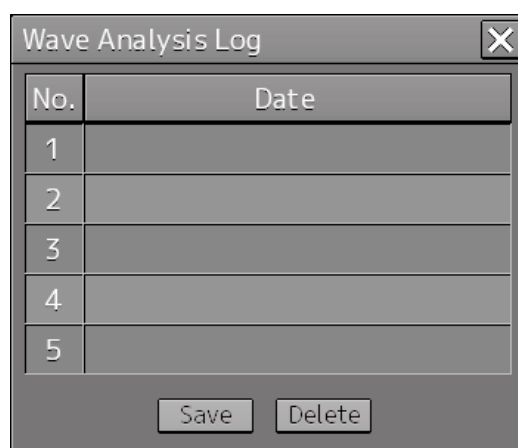
[6] Status

On the left column (19inch screen)/upper level (26inch screen), [Calc] (calculating), [Stopped] (stopping), or Interval (under interval) is displayed as the analysis status.

On the right column (19-inch screen)/lower level (26-inch screen), [Success] (successful) or Halt [01] (not SP mode)) is displayed as the analysis result.

[7] [Save Log] button

When this button is clicked on, the save dialog of the analysis result log is displayed.



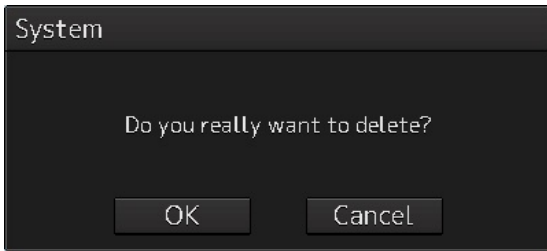
To save the log, click on the [Save] button.

The radar echo data (about 60 sheets) that was used for output of the analysis result that is currently displayed is saved.

The contents are the same as for the png file and the inf file that are saved by [RecRADAR].

To delete the log that has been saved, select the log from the list and click on the [Delete] button.

When the button is clicked on, a deletion confirmation dialog is displayed. To execute the deletion, click on the [OK] button.



Memo

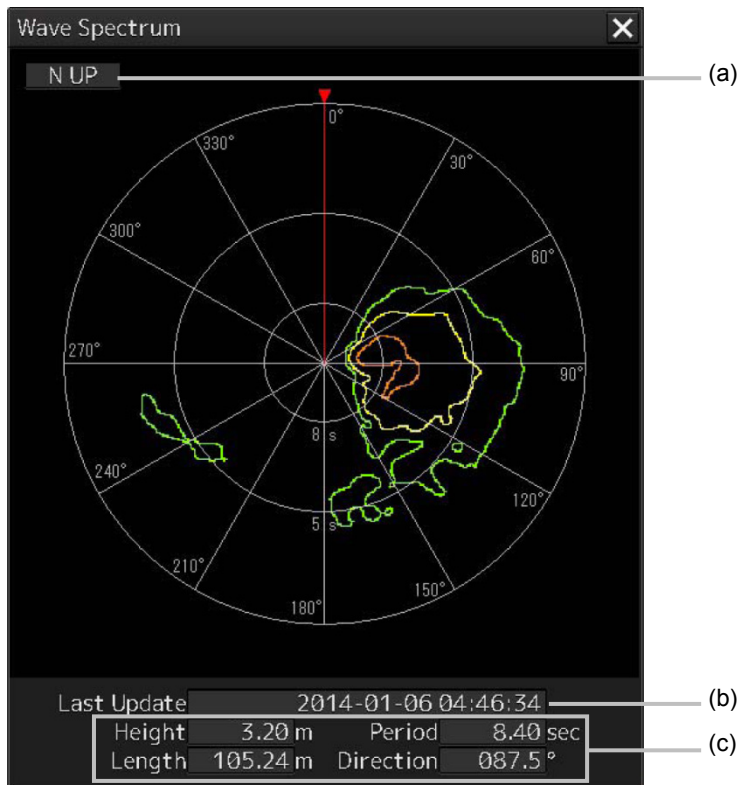
The log saving date and time are displayed in the format that is set in [Display Style] after selecting [Maintenance] - [Date/Time/Time Zone] on the menu.

[8] [Show Spectrum] button

When this button is clicked on, the "Wave Spectrum" window is displayed.

The "Wave Spectrum" window displays the result of wave analysis using the RADAR in a spectrum.

The angle on the circle indicates the angle of incoming wave and the concentric circle indicates the wave cycle.



(a) [N UP] and [H UP]

The wave direction is displayed with [N UP] (true bearing display) or [H UP] (relative bearing display).

The display is linked to [Display Mode] of the "Wave Analysis" window.

(b) [Last Update] (analysis time)

Displays the time when the last analysis was performed.

Memo

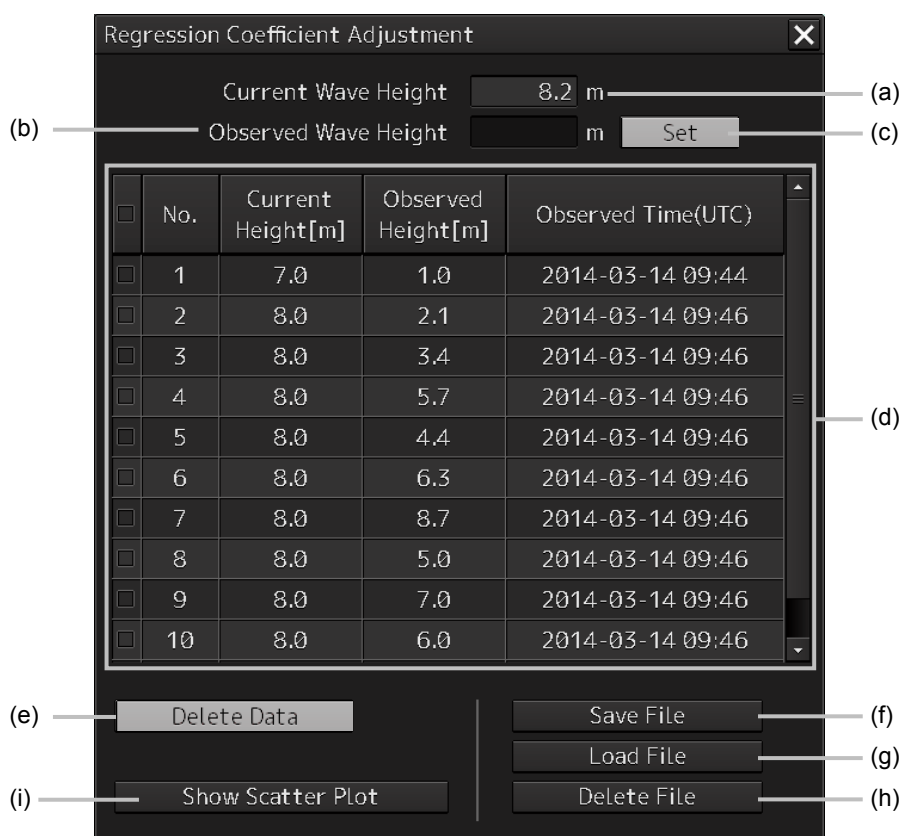
The time is displayed in the format that is set in [Display Style] after selecting [Maintenance] - [Date/Time/Time Zone] on the menu.

(c) Analysis result

Displays [Height] (wave height), [Length] (wave length), [Period] (wave direction), and [Direction] (wave direction) of Primary (primary wave).

[9] [Adjustment] button

Clicking this button causes the "Regression Coefficient Adjustment" (peak value regression coefficient adjustment) dialog to be displayed.



(a) [Current Wave Height]

The wave height determined by radar wave analysis is displayed.

(b) [Observed Wave Height] (Observed peak value)

Input the observed peak value.

(c) [Set] button

Clicking this button causes the current wave height value and observed peak value to be added to the peak value list.

The added wave height value and observed peak value are automatically stored in the file. A maximum of 100 data items can be displayed.

When the number of data items reaches 100, the pop-up menu appears to indicate that there are 100 data items when you have clicked the [Set] button. Clicking the [OK] button allows the pop-up menu to be closed.

(d) Peak value list

The current wave height value, observed peak value and time of observation is displayed.

(e) [Delete Data] button

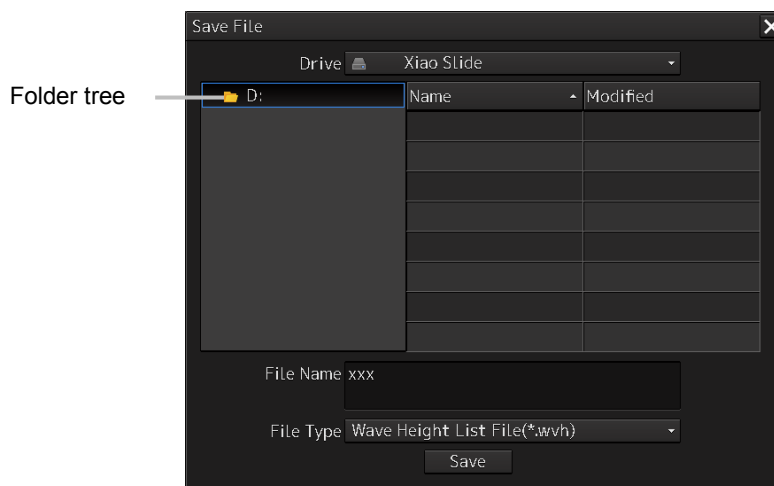
The data selected on the peak value list will be deleted.

Clicking this button causes the delete confirmation dialog to appear. To execute deflection, click the [OK] button.

(f) [Save File] button

This button is used to assign a file name to the data saved by clicking the [Set] button, and to save the same data, or to specify another destination location to the data there.

Clicking this button causes the "Save File" dialog box to appear.



After selecting the save destination in the [Drive] combo box and the folder of the save destination in the folder tree, enter the file name in the [File Name] input box. After checking that wvh is displayed in the [File of type] (file type) combo box, click on the [Save] button.

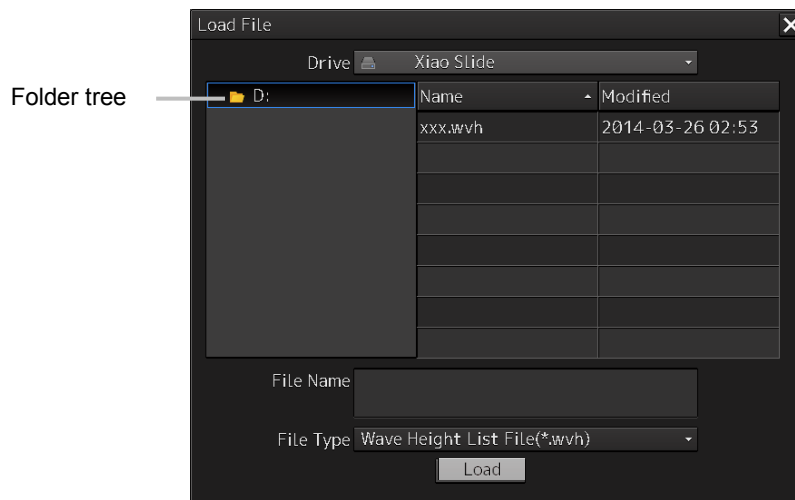
When a display unit is selected in the [Drive] combo box, the save target folder cannot be changed.

If the file having the same name is present in the destination location, a confirmation dialog will appear to ask you if overwriting is desired or not. If overwriting is required, click on the [Yes] button.

(g) [Load File] button

The file saved by the [Save File] button is read out.

Clicking this button causes the "Load File" dialog to appear.



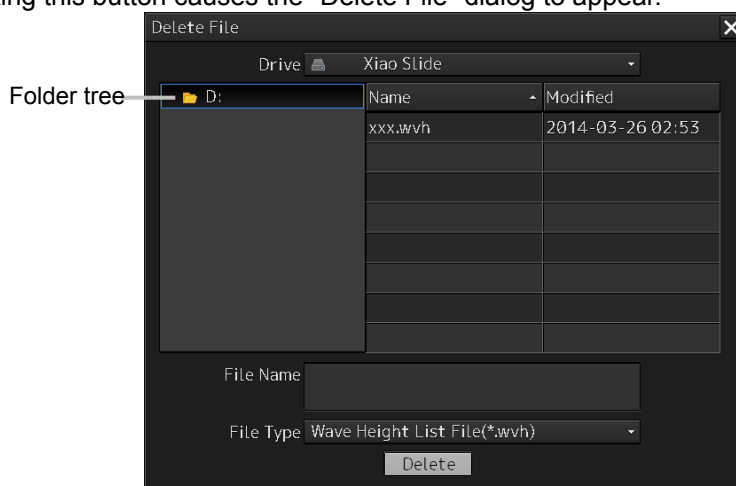
Select the read destination on the [Drive] combo box, and select the folder on the read destination using the folder tree. After that, select from the file list the file to be read out. Then click on the [Load] button.

When a display unit is selected in the [Drive] combo box, the read target folder cannot be changed.

(h) [Delete File] button

The save file is deleted.

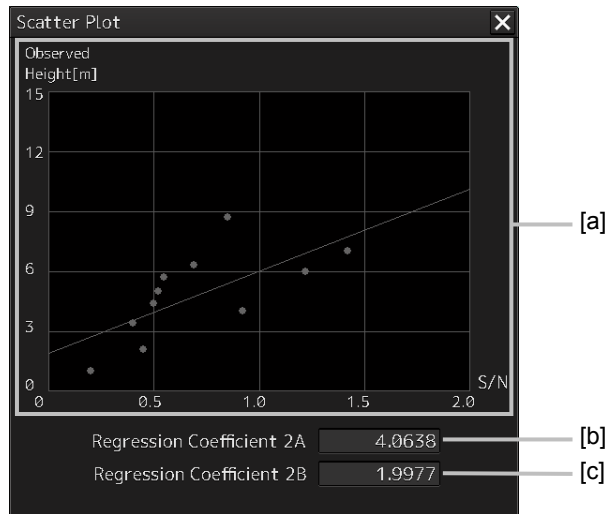
Clicking this button causes the "Delete File" dialog to appear.



Select the location of the file to be deleted using the [Drive] combo box and the folder tree. After that, select the file to be deleted from the file list. Then click on the [Delete] button.

(i) [Show Scatter Plot] (scattergram indication) button

Clicking this button causes the "Scatter Plot" (scattergram) window to be displayed.



[a] Scattergram

This horizontal axis represents the S/N and the vertical axis shows the observed peak value scattergram.

[b] [Regression Coefficient 2A] (regression line α value)

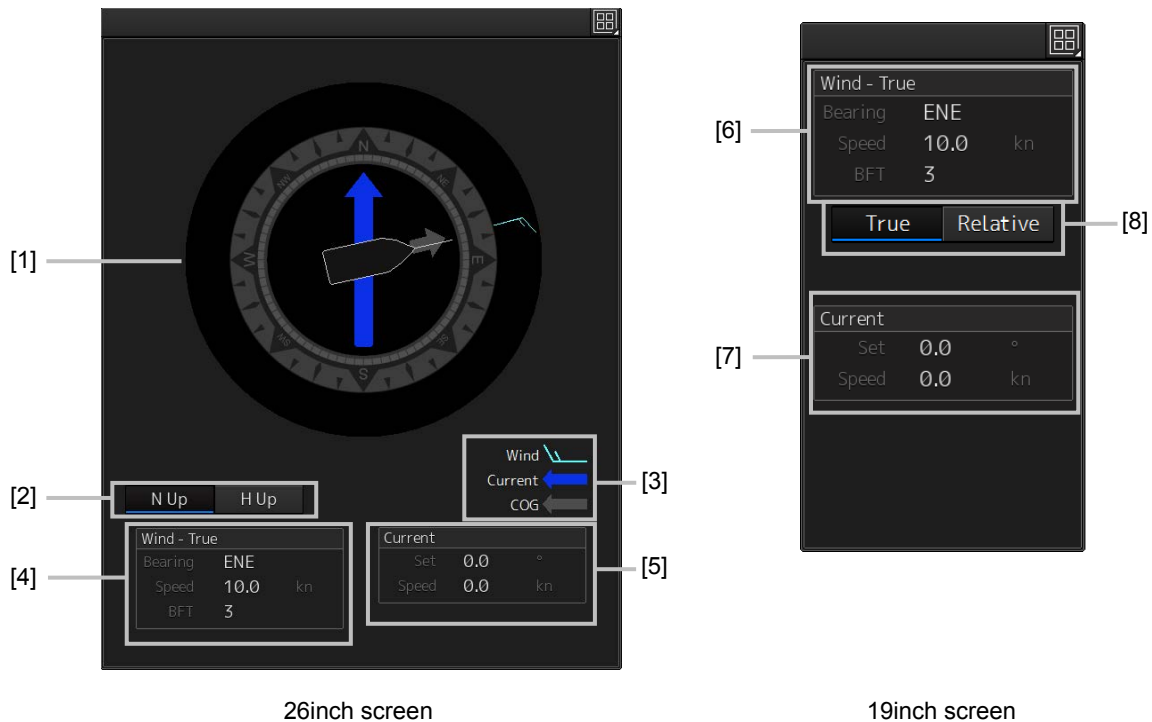
The α value (Gradient 'a' of regression line $y=ax+b$) of the regression line will be shown.

[c] [Regression Coefficient 2B] (regression line β value)

The β value (Contact 'b' of regression line $y=ax+b$) of the regression line will be shown.

2.3.1.7 Current/Wind Block

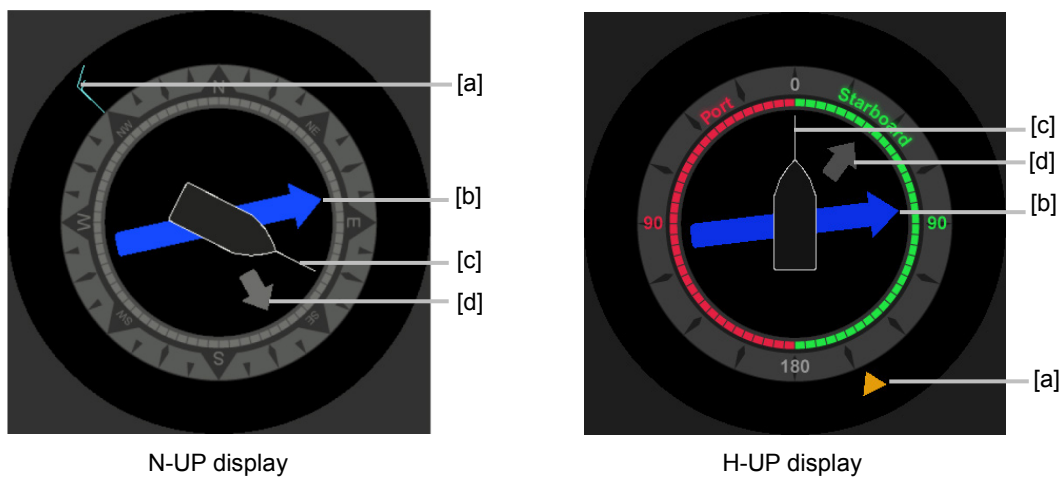
The Wind/Current Block shows the wind speed and current information.



[1] Wind/Current meter

Displays the wind speed and current.

The display varies depending on the setting of the [N-UP]/[H-UP] (N-UP/H-UP switching) button.



[a] Wind bearing/speed

Indicates the wind bearing/wind speed.

Arrow feathers are shown when N-UP is selected.

The arrowhead indicates a leeward direction. The number of feathers indicates the wind speed.

Memo

The number of feathers is based on the Beaufort scale.

A triangle arrow is shown when N-UP is selected.

The arrowhead indicates a leeward direction.

[b] Flow direction/speed

Indicates the flow direction.

The arrow indicates the direction of the current.

[c] Ship's heading

Indicates the ship's heading.

When N-UP is selected, the north of the direction ring of the meter is fixed on top, and the own ship symbol rotates to indicate the heading.

When H-UP is selected, the ship's heading is fixed on top to show the direction.

[d] Ground direction

Indicates the ground direction.

[2] [N-UP]/[H-UP] button (Displayed only for 26inch display)

Used to change the display method for the ship's heading.

When the [N-UP] button is clicked, the north of the direction ring of the meter is fixed on top, and the own ship symbol rotates to indicate the heading.

When the [H-UP] button is clicked, the ship's heading is fixed on top to show the direction.

[3] Legends

Legends of the Wind/Current meter

[4] Wind bearing/speed information

Shows the wind bearing/speed information.

Display varies depending on the ship's heading display method.

Wind - True			
Bearing	ESE		
Speed	10.0	kn	
BFT	3		

Ship's heading display is N-UP

Wind - Relative			
Bearing		164.8	°
Speed	9.7	kn	

Ship's heading display is H-UP

For N-UP, [Bearing] (wind bearing), [Speed] (wind speed), and [BFT] (Beaufort scale) are shown as numerical values.

When H-UP is selected, [Bearing] (wind direction) and [Speed] (wind velocity) are displayed in numerical values. For a 26-inch screen, either of the following symbol is also displayed.



: Indicates the windward is on S (starboard) side.



: Indicates the windward is on P (port) side.

Memo

No symbol is displayed with the wind bearing 0° or 180°.

[Speed] (wind speed) is shown as a numerical value.

[5] Tidal current information

Shows the tidal current information.

Display varies depending on the ship's heading display method.

Current		
Set	270.8	°
SPD	2.9	kn

Ship's heading display is N-UP

Current		
Set	 179.7	°
SPD	2.9	kn

Ship's heading display is H-UP

[Set] (tidal current direction) and [SPD] (flow speed) are displayed in numerical values.

For 26-inch screen, either of the following symbols is also displayed.



: The downstream is on the S (starboard) side.



: The downstream is on the P (port) side.

Memo

When the tidal current bearing is 0° or 180°, no symbol is displayed.

[6] Wind bearing/speed information

Shows the wind bearing/speed information.

Display varies depending on the wind bearing true/relative display method.

Wind - True		
Bearing	ESE	
Speed	10.0	kn
BFT	3	

True wind bearing

Wind - Relative		
Bearing	 164.8	°
Speed	9.7	kn

Relative wind bearing

For True wind bearing, [Bearing] (wind bearing), [Speed] (wind speed), and [BFT] (Beaufort scale) are shown as numerical values.

For display of a relative bearing, [Bearing] (wind direction) and [Speed] (wind velocity) are displayed in numerical values.

[7] Tidal current information

Shows the tidal current information.

Tidal current information is displayed as follows according to the tidal current true/relative direction.

Current			
Set	270.8	°	
Speed	2.9	kn	

True current direction

Current			
Set	179.7	°	
Speed	2.9	kn	

Relative current direction

[Set] (current direction) and [Speed] (flow speed) are shown as numerical values.

[8] [True]/[Relative] (True/Relative wind switching) button (Displayed only for 19inch display)

Switches between True and Relative display for wind bearing and tidal current.

Click the [True] (true wind bearing) button to show wind bearing and tidal current in the true direction.

Click the [Relative] (relative wind bearing) button to show wind bearing and tidal current in the relative direction.

2.3.1.8 Conning

The Conning shows simple conning information.

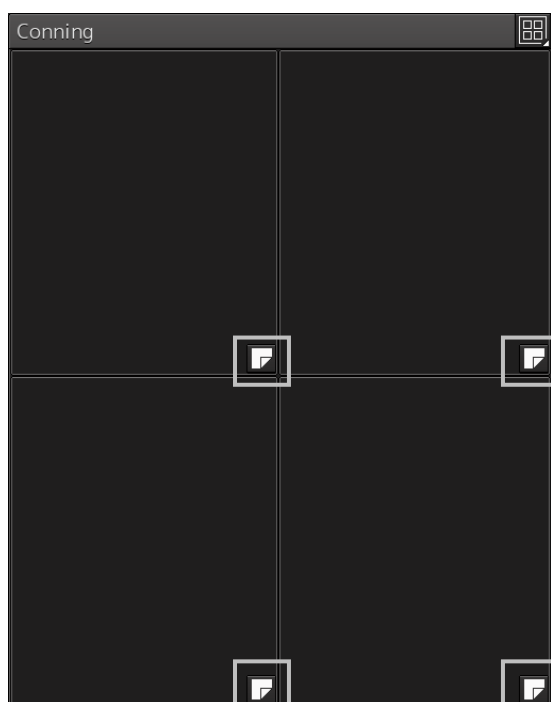
- 1 Click [Conning] on the "Page Selection" dialog box.

When [Conning] is not displayed, drag the scroll bar downwards.



The [Conning] window is displayed.

The [Conning] window consists of four blocks, and each block has a window switching button.

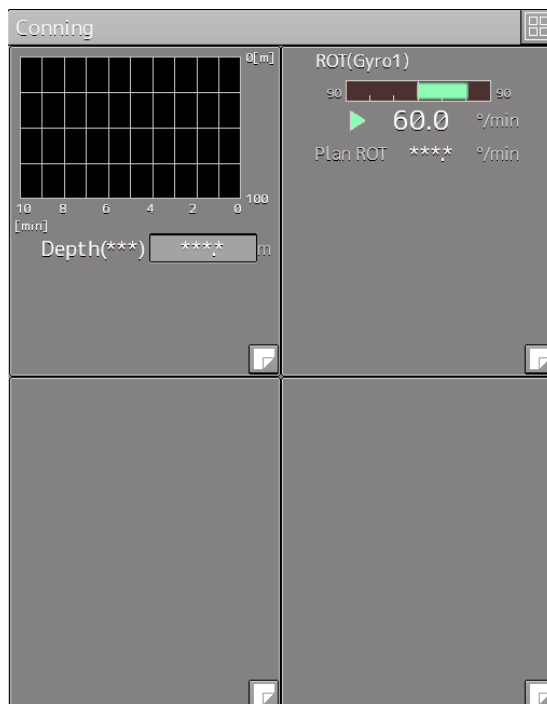


- 2** Click a window switching button to show the [Contents Selection] window.



- 3** Click the [Depth] or [ROT] (Rate Of Turn) button.

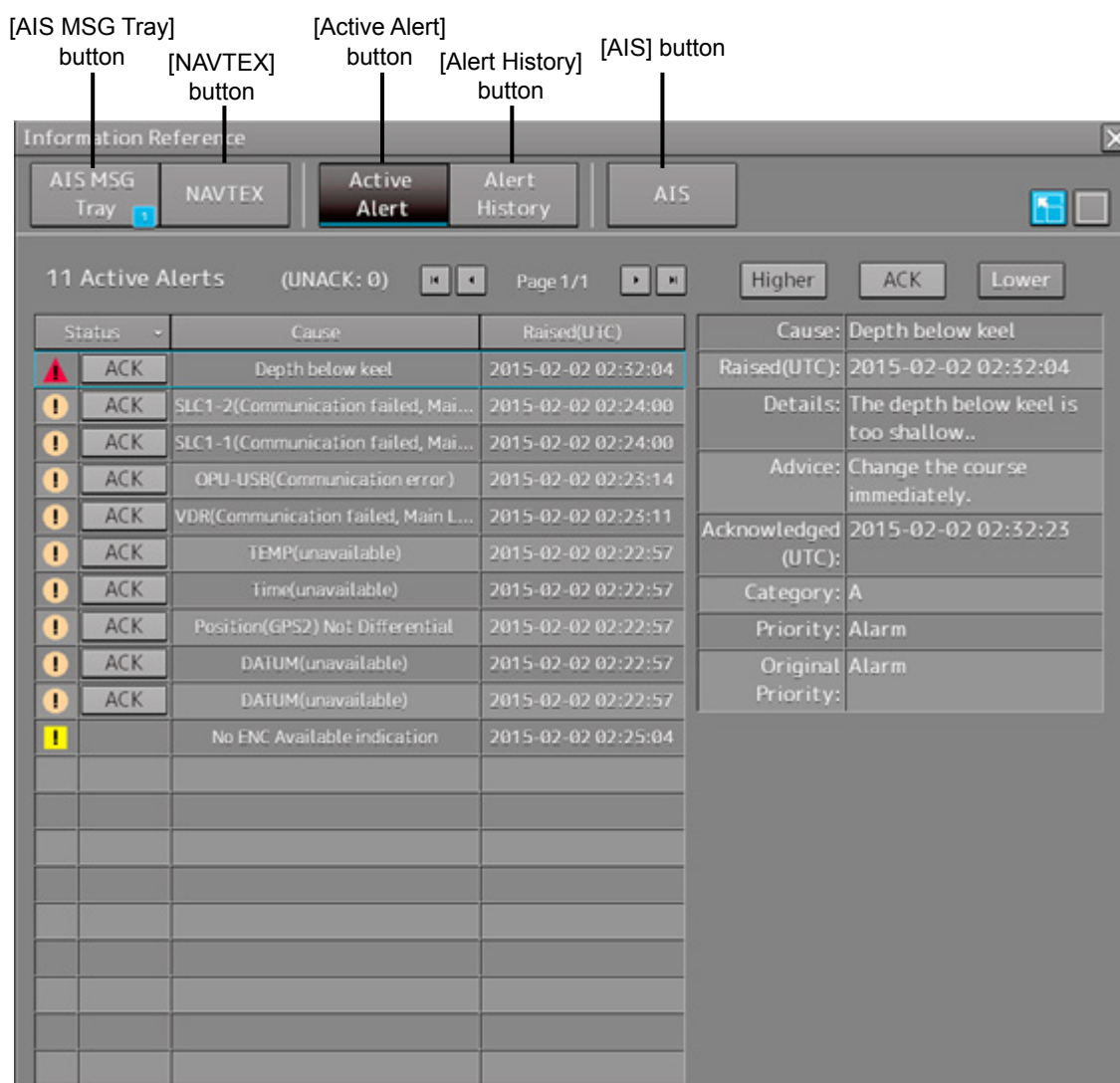
On the [Conning] window, the [Depth] information or [ROT] information is shown.



In this example, the [Depth] information is shown at top left, and the [ROT] information is shown at top right.

2.3.2 Information reference windows

By clicking on the buttons in the window, the contents that are displayed in the window can be switched.

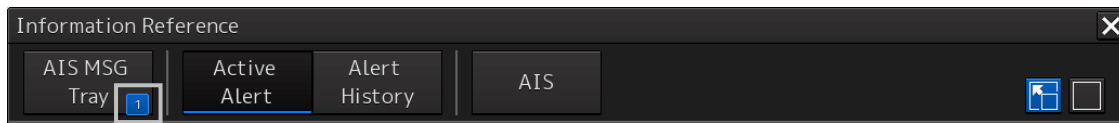


Information reference related windows are listed below.

Button	Displayed content	Related section
[AIS MSG Tray]	AIS message tray	2.3.2.2 AIS MSG Tray
[NAVTEX] (Displayed only when NAVTEX is installed)	NAVTEX message	2.3.2.3 NAVTEX
[Active Alert]	Active alert that occurred in the equipment	2.3.2.4 Active Alert
[Alert History]	Alert history that occurred in the equipment	2.3.2.5 Alert History
[AIS]	Own ship's AIS information	2.3.2.6 AIS

When unread messages exist

The number of unread messages is displayed on the [AIS MSG Tray] button as a badge.

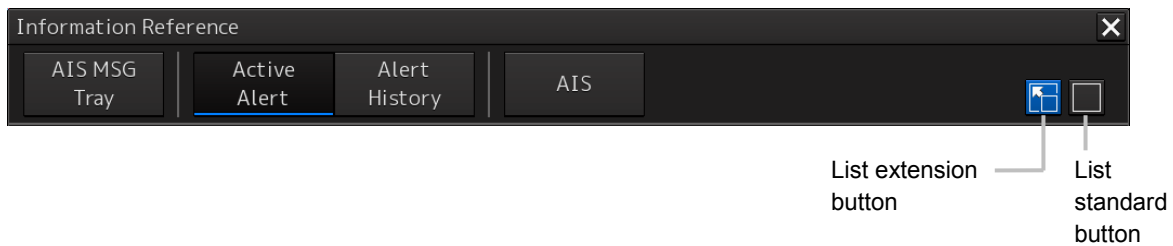


2.3.2.1 Switching between a standard window and an extended window

The information reference window can be switched to a standard window or an extended window.

To switch to an extended window, click on the List extension button.

To switch to a standard window, click on the List Standard button.



[Example of extended window]

The screenshot shows the 'Information Reference' window in its extended view. The top bar contains the same tabs as before. Below the tabs, there is a header for '09 Active Alerts' with '(UNACK: 2)' and navigation buttons. A table lists the alerts, with the last one, 'Information overscale', highlighted in blue. To the right of the table is a detailed view for the selected alert.

Status		Cause	Raised(UTC)
	ACK	Depth below keel	2010-10-27 08:05:53
	ACK	Crossing caution area	2010-10-27 12:01:37
	ACK	SLC1-1(Communication failed, Mai...	2010-10-27 06:02:19
	ACK	SLC1-2(Communication failed, Mai...	2010-10-27 06:02:19
	ACK	No.1 Radar(Communication failed, ...	2010-10-27 06:02:19
	ACK	No.3 ECDIS(Communication failed,...	2010-10-27 06:02:19
	ACK	OPU-USB(Communication error)	2010-10-27 06:01:15
	ACK	OPA-OPB(Communication error)	2010-10-27 06:01:15
		Information overscale	2010-10-27 12:01:36

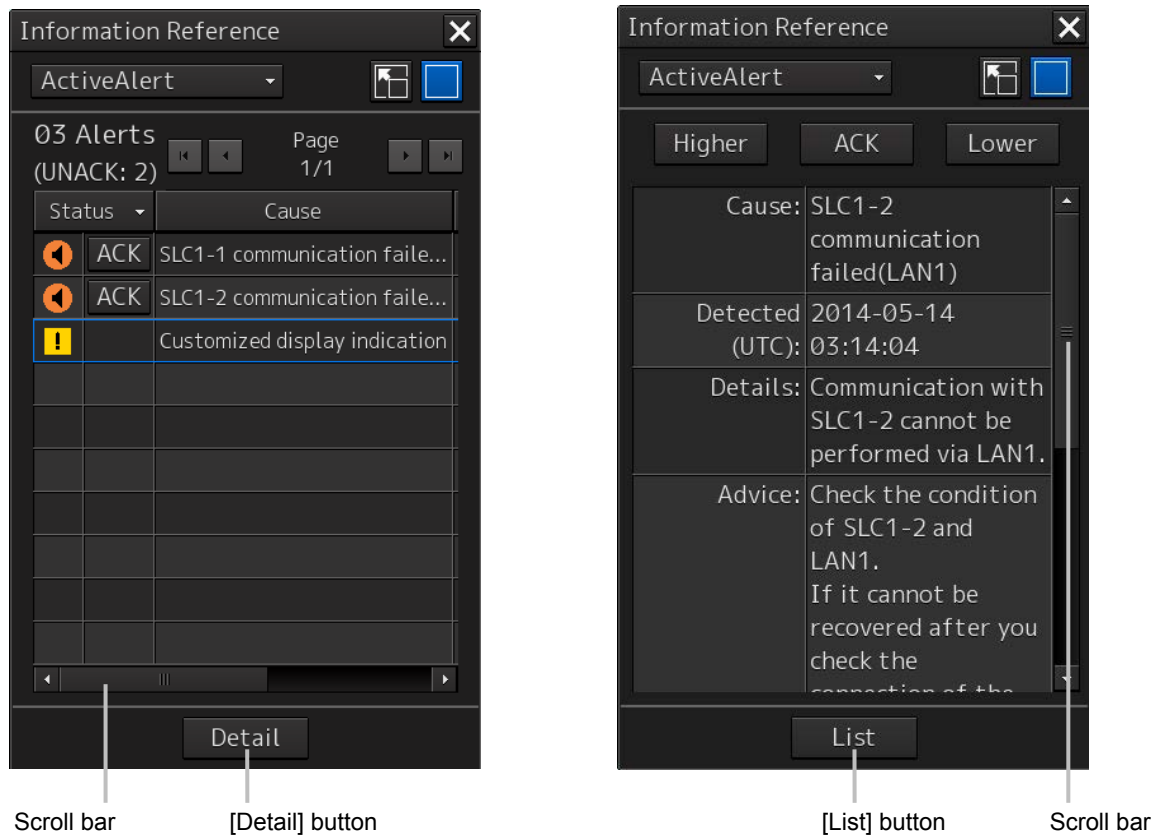
Cause:	Information overscale
Raised(UTC):	2010-10-27 12:01:36
Details:	-
Advice:	-
Acknowledged (UTC):	-
Category:	A
Priority:	Caution
Original Priority:	Caution

[Example of standard window]

A list screen and a detail screen are available for the standard window.

To switch to the detail screen: Click on the [Detail] button.

To switch to the list screen: Click on the [List] button.



When the display contents overlap the top, bottom, left, or right side of the screen, a scroll bar is displayed.

By dragging the scroll bar, the overlapped section can be displayed.

Memo

A standard window is displayed at the initial display.

When the RADAR transmission status is Transmit in RADAR mode, the extended window cannot be displayed.

2.3.2.2 AIS MSG Tray

AIS messages are displayed.

For the details of the AIS message tray, refer to "6.11 AIS Message Tray".

Information Reference

AIS MSG Tray

Active Alert

Alert History

AIS

TX Tray

Saved Tray

RX Tray

Message Format: Addressed

Message Category: Safety

No. ▾	Date(UTC)	MMSI	Ship's Name

MMSI

Ship's Name

AIS Message

Edit

Select

The NAVTEX message is displayed.



The screenshot shows the 'Information Reference' screen. At the top, there are two tabs: 'AIS MSG Tray' and 'NAVTEX'. The 'NAVTEX' tab is selected. Below the tabs, there are two buttons: 'Active Alert' and 'Alert History'. The 'Alert History' button is selected. Below the buttons, there is a table with the following columns: 'No.', 'Date Received(UTC)', 'Station', 'Message', and 'Disp'. The first row of the table contains the following data: '1', '2015-02-16 14:00:00', 'I', 'E', and a checked checkbox. Below the table, there are four labels: (a), (b), (c), and (d), each pointing to a specific column header: (a) points to 'Date Received(UTC)', (b) points to 'Station', (c) points to 'Message', and (d) points to 'Disp'.

No.	Date Received(UTC)	Station	Message	Disp
1	2015-02-16 14:00:00	I	E	☒

(a) (b) (c) (d)

Displays a message received time.

Displays the message transmission source base station ID (A to Z).

(c) Message ID

Displays the message ID (A to Z).

(d) Disp check box

When this check box is checked, the symbol is displayed.

Sorting a message list

When any of the items in the title line is clicked on, the messages are sorted based on the item.

No.	Date Received(UTC) ▾	Station	Message	Disp
1	2015-02-16 14:00:00	I	E	☒

[2] Message details

The screenshot shows a 'Message details' window. It contains the following elements:

- Station:** A text field containing 'I' with a dropdown arrow, labeled (a).
- Message:** A text field containing 'E - Meteorological forecasts' with a dropdown arrow, labeled (b).
- Expiration Date:** A text field containing '2015-03-03 14:00:00 (UTC)' with a calendar icon to its right, labeled (c).
- NAVTEX Message:** A large, empty rectangular area for displaying the message content, labeled (d).

(a) Station ID

Displays the message transmission source base station ID (A to Z) and the name.

(b) Message ID

Displays the message ID and name.

(c) Expiration Date

Set the expiration date of the message.

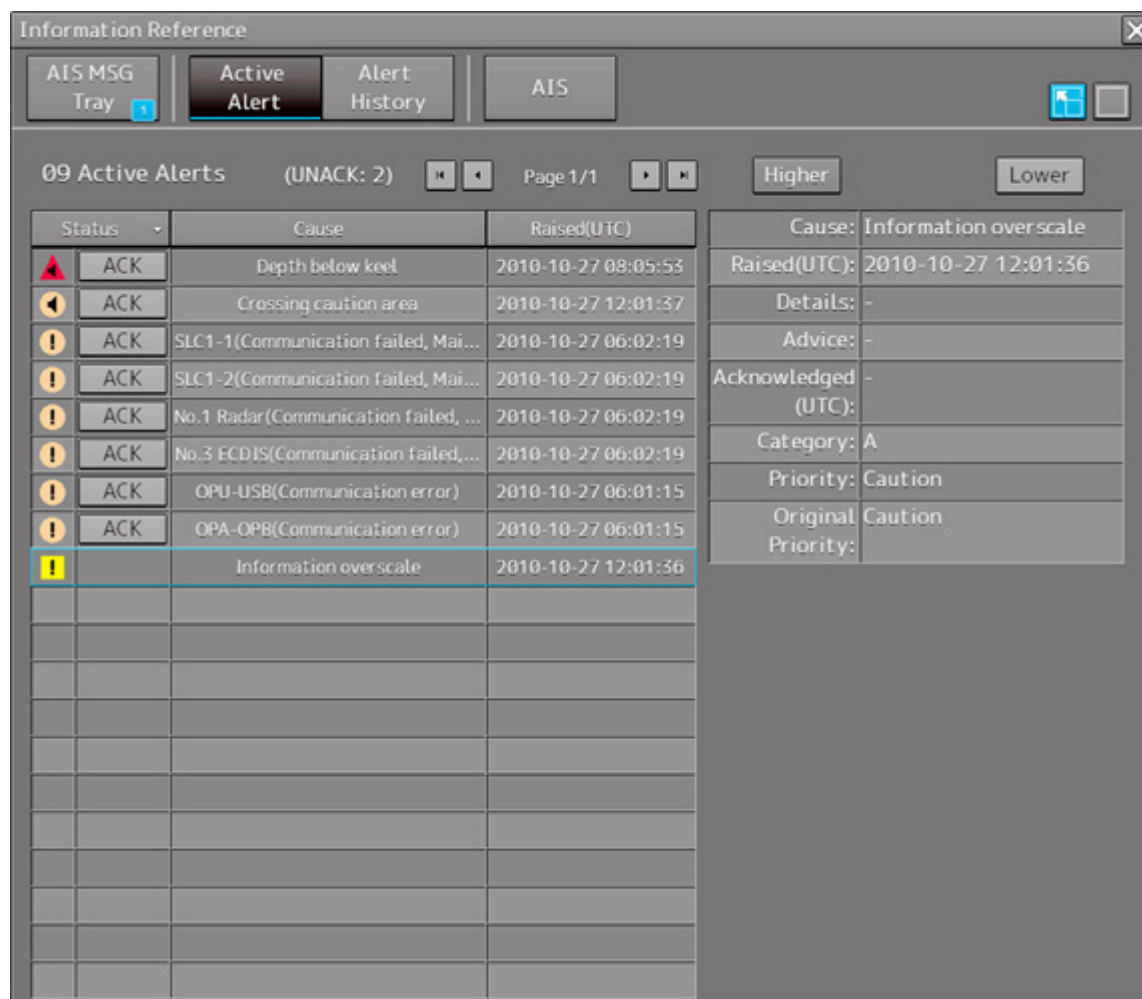
- When the calendar icon  is clicked on, a calendar picker is displayed. Set the expiration date by using the calendar picker.
- The color of the Expiration Date changes for the expired message.

(d) NAVTEX Message

A message is displayed.

2.3.2.4 Active Alert

This window displays active alerts that occurred in this equipment.



For the details, refer to "3.7.4 Displaying alert list and alert history".

2.3.2.5 Alert History

This window displays the history of alerts that occurred in this equipment.

Information Reference

AIS MSG Tray

Active Alert

Alert History

AIS

Page 1/4

Priority	Cause	Detected(UTC)	Acknowledged(UTC)	Removed(UTC)
Caution	No ENC Available indication	2014-04-11 03:32:41	-	2014-04-11 03:36:19
Warning	AIS(unavailable)	2014-04-11 03:25:36	-	2014-04-11 03:31:24
Warning	Heading(unavailable)	2014-04-11 03:25:07	-	-
Warning	Position(unavailable)	2014-04-11 03:24:37	-	-
Warning	COG/SOG(unavailable)	2014-04-11 03:24:37	-	-
Warning	GPS Time(unavailable)	2014-04-11 03:24:37	-	-
Warning	Log Speed(unavailable)	2014-04-11 03:24:37	-	-
Warning	No.1 LOG communication fail...	2014-04-11 03:24:26	-	2014-04-11 03:32:23
Warning	No.1 Gyrocompass communic...	2014-04-11 03:24:09	-	2014-04-11 03:32:23
Warning	AIS communication failed(Dir...	2014-04-11 03:24:06	-	2014-04-11 03:31:24
Warning	No.1 EPFS communication fai...	2014-04-11 03:24:06	-	2014-04-11 03:32:23
Warning	TXRX(Communication error)	2014-04-11 03:24:01	-	-
Caution	No ENC Available indication	2014-04-11 03:23:52	-	2014-04-11 03:31:03
Caution	No ENC Available indication	2014-04-11 03:23:19	-	-
Warning	AIS communication failed(Dir...	2014-04-11 03:23:19	-	2014-04-11 03:23:37
Warning	Heading(unavailable)	2014-04-11 03:20:05	-	-
Warning	COG/SOG(unavailable)	2014-04-11 03:19:35	-	-
Warning	Position(unavailable)	2014-04-11 03:19:35	-	-
Warning	GPS Time(unavailable)	2014-04-11 03:19:35	-	-
Warning	Log Speed(unavailable)	2014-04-11 03:19:35	-	-

For the details, refer to "3.7.4 Displaying alert list and alert history".

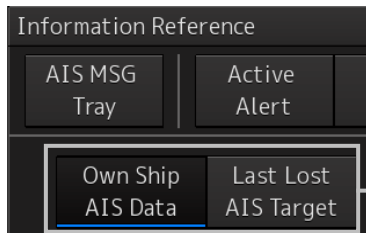
Memo

The Alert History screen is displayed under the extended window only. A standard window is not available.

2.3.2.6 AIS

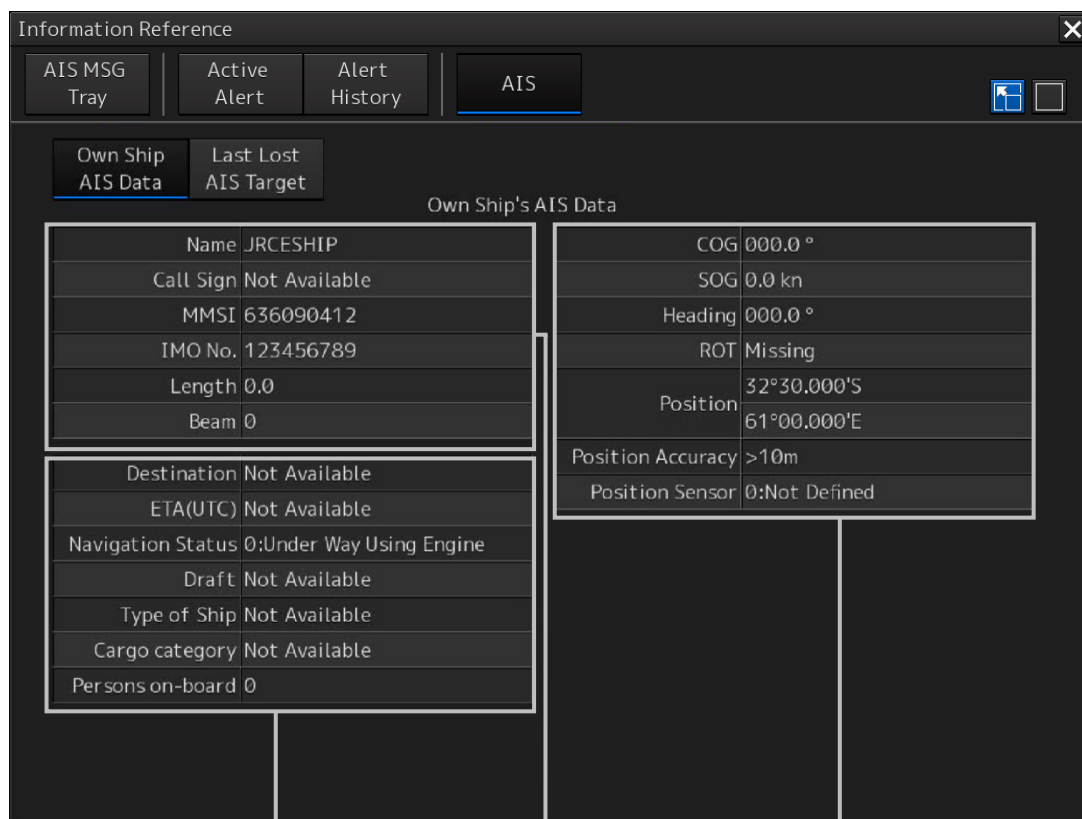
This window displays AIS information.

The AIS window includes the "Own Ship AIS Data" window that displays the AIS information of the own ship and "Last Lost AIS Target" window that displays the information of the last AIS target that is lost.



When the [Own Ship AIS Data] button is clicked on, the Own Ship AIS Data window is displayed.
When the [Last Lost AIS Target] button is clicked on, the information window of the last lost AIS target is displayed.

Own Ship AIS Data window



Static information that may be changed at navigation

Ship's specific static information

Dynamic information

For the details, refer to "6.15 Confirming Own Ship's AIS Information".

Window of the information of the last lost AIS target

Information Reference

AIS MSG Tray Active Alert Alert History **AIS**

Own Ship AIS Data **Last Lost AIS Target**

Last Lost AIS Target Data

Name	SHIP1
Call Sign	1234567
MMSI	377470001
IMO No.	Not Available
Length	0.0
Beam	0

Destination	YOKOHAMA
ETA(UTC)	Not Available
Navigation Status	0:Under Way Using Engine
Draft	Not Available
Type of Ship	Not Available
Cargo category	Not Available
Persons on-board	0

Bearing	001.9 °
Range	5.60 NM
COG	000.0 °
SOG	10.0 kn
Heading	000.0 °
ROT	Missing
Position	42°42.360'N 141°37.100'E
Position Accuracy	<10m
Position Sensor	0:Not Defined

Static information that may be changed at navigation

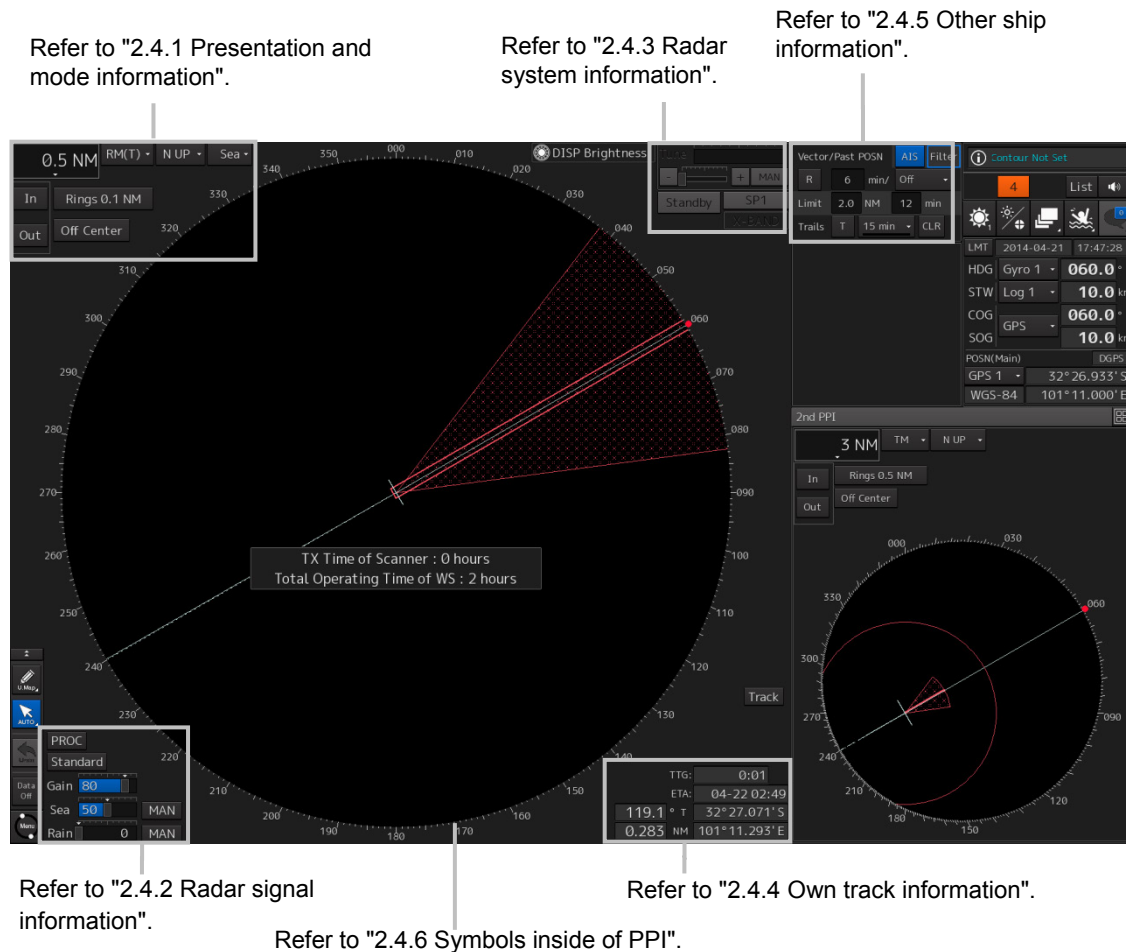
Ship's specific static information

Dynamic information

For the details, refer to "6.16 Displaying the Last Lost AIS Target".

2.4 Names and Main Functions of Each Section of the RADAR Screen

This section describes the names and the main functions of each section of the RADAR screen.



2.4.1 Presentation and mode information

Range scale combo box

Set the observation range.

For the details, refer to "5.3.2 Changing the observation range".

Motion mode combo box

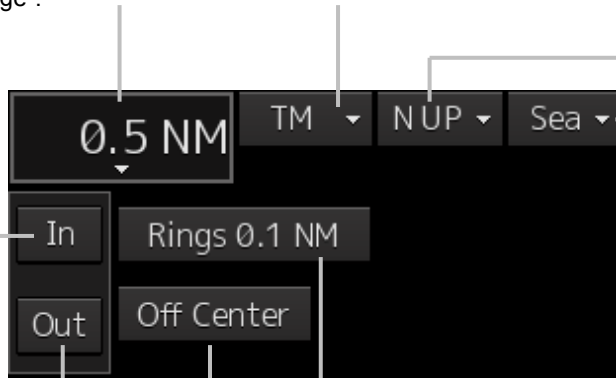
Set the motion mode.

For the details, refer to "5.4.6 Setting a motion mode".

Bearing mode combo box

Set the bearing mode.

For the details, refer to "5.4.5 Setting the azimuth mode".



Stabilization mode combo box

Set the stabilization mode.

For the details, refer to "5.4.7 Setting the Stabilization Mode".

[In] (Zoom In) button

Whenever this button is clicked on, the screen image is zoomed in by one level from the current range scale. When this button is held down, the image is zoomed in continuously.

[Out] (Zoom Out) button

Whenever this button is clicked on, the screen image is zoomed out by one level from the current range scale. When this button is held down, the image is zoomed out continuously.

Range rings display button

Use this button to switch range rings to On/Off.

For the details, refer to "4.4 Using the Range Rings".

[Off Center] button

Use this button to set Off Center to On/Off for the display position of the own ship's position (CCRP).

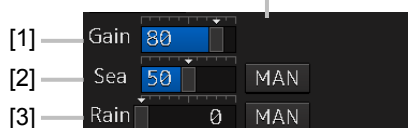
For the details, refer to "5.4.8 Moving own ship's display position (Off Center)".

2.4.2 Radar signal information

Observation Scene Selection button

This button sets an observation scene

For the details, refer to "5.3.7 Adjusting to optimal images (Selection of observation scenes)".



[1] Reception sensitivity adjustment

The reception sensitivity can be adjusted.
For the details, refer to "5.3.4 Adjusting gain".

[2] Sea clutter adjustment

The sea clutter rejection level can be adjusted.

For the details, refer to "5.3.5 Rejecting sea clutter (Sea)".

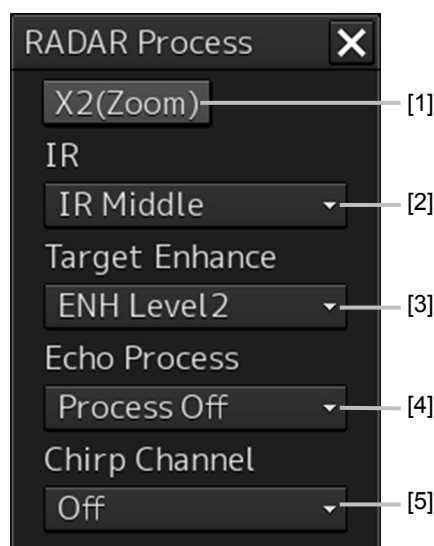
[3] Rain and snow clutter adjustment

The rain and snow clutter rejection level can be adjusted.

For the details, refer to "5.3.6 Rejecting rain/snow clutter".

RADAR signal processing setting button

This button sets RADAR signal processing. When this button is clicked on, a setting dialog box appears.



[1] [X2 (Zoom)] button

When this button is clicked on, the double scale zoom function is switched to On/Off.

For the details, refer to "5.4.10 Doubling the size of radar image".

[2] [IR] combo box

This setting is enabled to set a radar interference rejection function from the list

For the details, refer to "5.4.1 Interference Rejection (IR Function)".

[3] [Target Enhance] combo box

This setting is enabled to set a target enhancement function from the list

For the details, refer to "5.4.3 Enhancing targets".

[4] [Echo Process] combo box

This setting is enabled to set a video processing function from the list

For the details, refer to "5.4.4 Using video processing (Echo Process)".

[5] [Chirp Channel] combo box

This setting is enabled to set the Chirp Channel function by selecting On or Off from the combo box.

*The Chirp Channel function can be set only when a small solid -state radar antenna is connected. By changing the transmission central frequency (channel) of QON (Chirp wave: Frequency modulation pulse) that is used for pulse compression, interferences can be controlled.

2.4.3 Radar system information

On this window, verify, adjust, and set a signal tuning status.

The display varies according to the radar antenna type.

Standby/transmission switching button

Whenever this button is clicked on, the mode is switched to "Standby" or "Transmit". When the power for this equipment is turned on, "Preheat" is displayed on this button.

For the display change at power ON, refer to Step 3 in the section "5.2.1 Powering on and starting"



Magnetron radar is connected as the radar antenna

Confirmation and adjustment of tuning

This button checks the tuning status and slightly adjusts. For the details, refer to "5.3.3 Adjusting tune".

Transmission pulse length switching button

This button switches a transmission pulse length. For the details, refer to "5.4.2 Changing the transmitter pulse length".

Transmission band display

This button displays the transmission band that is currently used (X-Band or S-Band).

Control status and control antenna display at inter-switch connection

When this button is clicked on, the interswitch switching window is displayed. For the details of the inter-switch, refer to "Appendix C Setting the Interswitch".

Transmission pulse length switching button

This button switches a transmission pulse length. For the details, refer to "5.4.2 Changing the transmitter pulse length".

Tuning status display

When the standby/transmission switching button is set to "Preheat" or "Standby", no information is displayed. When the standby/transmission switching button is set to "Transmit", "Tuning OK" is displayed.



Solid state radar is connected as the radar antenna.

Transmission pulse length switching button

This button switches a transmission pulse length. For the details, refer to "5.4.2 Changing the transmitter pulse length".

Transmission band display

This button displays the transmission band that is currently used (S-Band).

Control status and control antenna display at inter-switch connection

When this button is clicked on, the inter-switch switching window is displayed. For the details of the inter-switch, refer to "Appendix C Setting the Interswitch".