

Controls

The system can be operated with the controls or the trackball module. The procedures in this operator's guide use the trackball module.



BRILL knob

Rotate: Adjust brilliance of FURUNO monitor.
Push: Select display palette.

**A/C RAIN,
A/C SEA knob**
No use.

GAIN knob

Adjust the gain of the radar picture.

Alert status LED

The color and state of the LED change according to alert status.

- Green, lighting: Normal operation status; no alerts generated.
- Red, flashing: Alert generated (not acknowledged).
- Red, lighting: Alert generated and acknowledged.

VRM rotary encoder

Adjust active VRM.

VRM 1: Activate, deactivate VRM1.
VRM 2: Activate, deactivate VRM2.

POWER switch

Turn the system on/off. (This control does not switch the monitor on/off.)

USB port

Connect USB flash memory.

Trackball module

Operates like a PC mouse.

EBL rotary encoder

Adjust active EBL.

EBL 1: Activate, deactivate EBL1.
EBL 2: Activate, deactivate EBL2.

ALARM ACK key

Alert acknowledgement for alerts generated by chart, navigation, etc.

Instant Access knob

Access functions on the Instant Access Bar.

- Rotate: Select item.
- Push: Confirm selection.

ESC key

Go back one step in the current sequence.

Keyboard

A keyboard for entering alphanumeric data.

MFD key

Toggle ECDIS and Conning modes.

UNDO key

Undo the last operation, when creating a route and user chart.

RANGE key

Select the chart scale.

VIEW/HIDE key

Show/hide the Instant Access Bar and Route Information box.

ACQ key

Activate cursor-selected sleeping AIS target.

TARGET DATA key

Display the detailed target data for selected TT, AIS target.

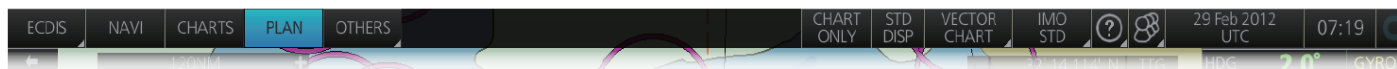
TARGET CANCEL key

Sleep cursor-selected AIS target.



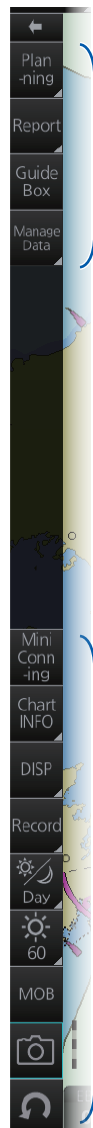
Display Layout

Status Bar (See page 3.)



Instant Access Bar

(See page 4.)

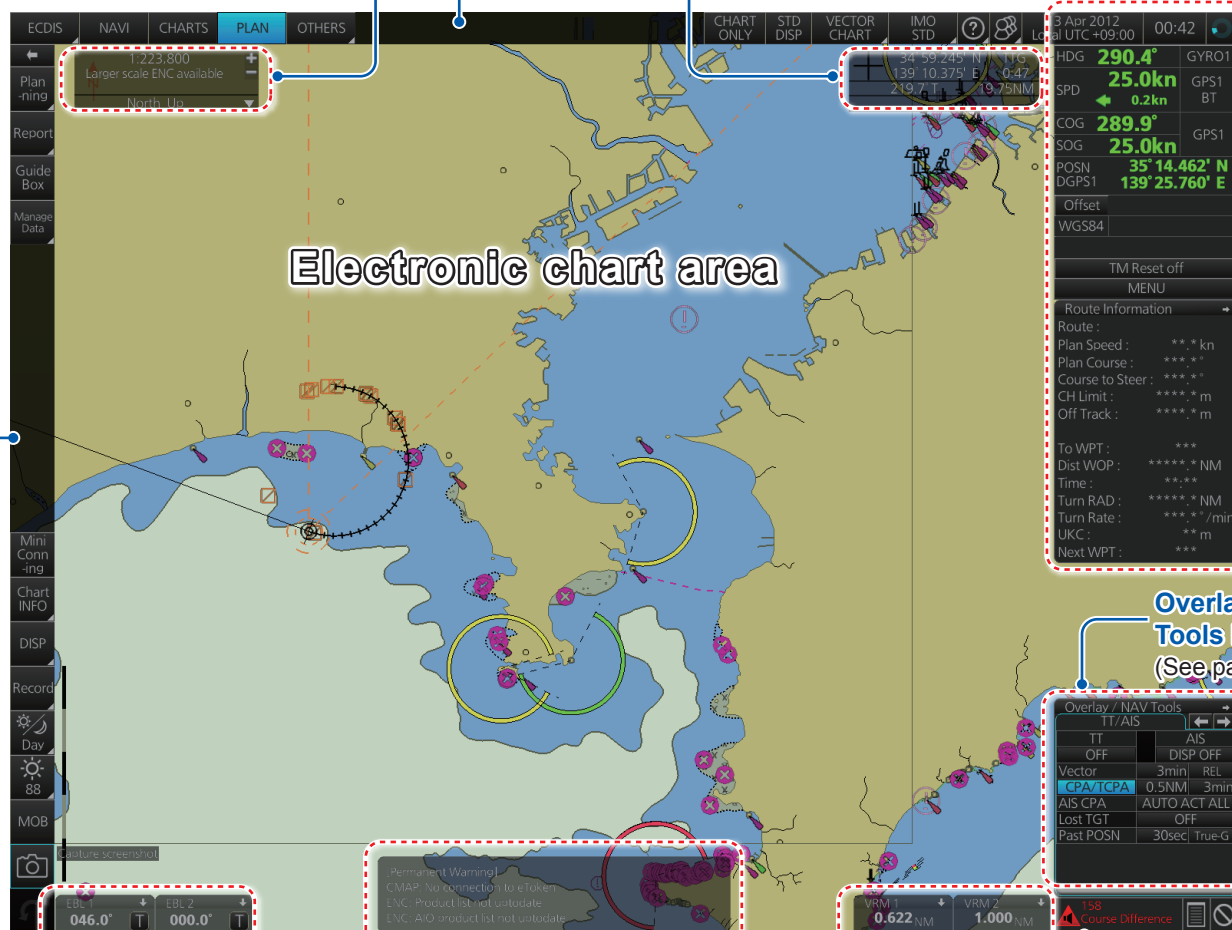


Upper section

Lower section

Chart scale, presentation mode box

Cursor position box



Electronic chart area

EBL1 box,
EBL2 box

Permanent warnings box

VRM1 box,
VRM2 box

Sensor information box

HDG	2.0°	GYRO1
SPD	-19.8kn	GPS1
	1.5kn	BT
COG	186.3°	GPS1
SOG	19.9kn	
POSN	33° 59.343' N	
DGPS1	134° 47.327' E	

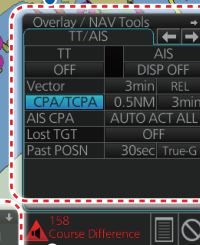
Own ship functions box

Offset
WGS84
TM/CU Reset

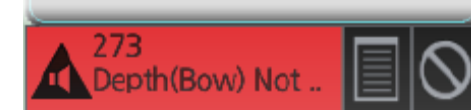
Route information box

MENU
Route Information
Route:
Plan Speed : **.* kn
Plan Course : ***.*
Course to Steer : ***.*
CH Limit : ****.* m
Off Track : ****.* m
To WPT : ***
Dist WPT : ****.* NM
Time : ****
Turn RAD : ****.* NM
Turn Rate : ***.*°/min
UKC : ** m
Next WPT : ***

Overlay/NAV
Tools box
(See page 11.)

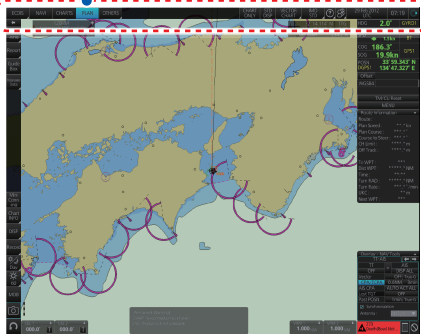


Alert box



Status Bar

Status Bar



OTHERS: Play back log.

PLAN: Select the Voyage planning mode.

CHARTS: Select the Chart maintenance mode.

NAVI: Select the Voyage navigation mode.

Operating mode: Select the ECDIS mode, ECDIS or Conning.

How to open a drop-down list



Click



Drop-down list



Chart format:
Select chart format, vector or raster.

STD DISP:
Restore IMO standard display.

CHART ONLY:
Show only the chart, when left button is pressed and held down.

User settings:
- Show the Settings menu.
- Manage profiles.

Display the operator's manual, ECDIS program no. and system information.

Chart database:
Select the pre-defined presentations of ENC content: IMO BASE, IMO STD or IMO ALL.

Spinner:
Rotates clockwise if the system is working properly.

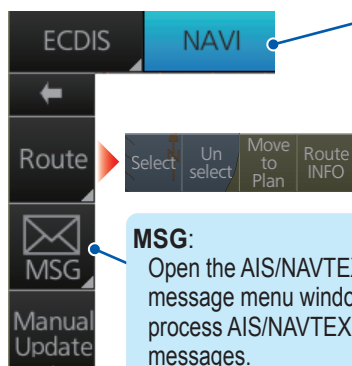
Time: Time (local or UTC)

Date:
Display the date; select the time to use, local or UTC.

Instant Access Bar

Upper section (by operating mode)

Voyage navigation mode



Select:
Open route selection menu window to select the route to follow.

Unselect:
Stop following a route.

Move to Plan:
Transfer route to Voyage planning mode to edit route.

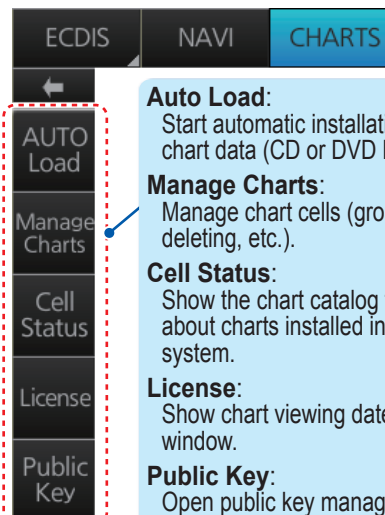
License:
Show chart viewing date setup window.

Route INFO:
Find details about route.

MSG:
Open the AIS/NAVTEX message menu window to process AIS/NAVTEX messages.

Manual Update: Open the manual update menu window to insert chart update symbols manually.

Chart maintenance mode



Auto Load:
Start automatic installation of the chart data (CD or DVD ROM).

Manage Charts:
Manage chart cells (grouping, deleting, etc.).

Cell Status:
Show the chart catalog to get info about charts installed in the system.

License:
Show chart viewing date setup window.

Public Key:
Open public key management window.

Lower section

SET:
Show setting windows for chart, symbol, user chart.

TWO DISP:
Split screen into two, horizontally or vertically.

AIO:
Display Admiralty Information Overlay.

Show software keyboard.

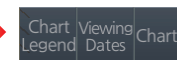


Mini conning:
Show and hide the mini conning display, available in the Voyage navigation and Planning navigation modes.

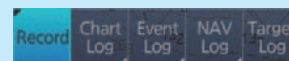
Chart Legend:
Find data about current chart.

Viewing Dates:
Set "display date" and "approved until" dates.

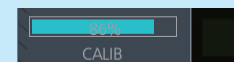
Chart 1:
Show overview of ECDIS chart symbols.



Record buttons:
Record user/position events to the event log; access various logs.

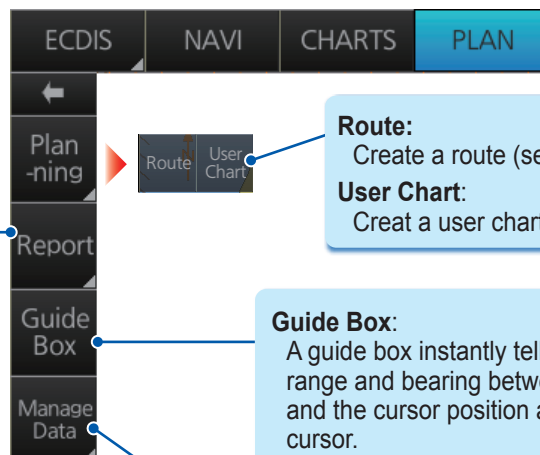
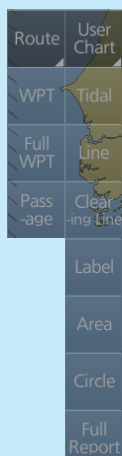


Adjust display brilliance.



Voyage planning mode

Report:
See route reports on waypoints and passage plan as well as user chart reports.

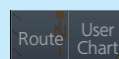


Route:
Create a route (see page 5).

User Chart:
Create a user chart (see page 7).

Guide Box:
A guide box instantly tells the operators the range and bearing between the last waypoint and the cursor position as you drag the cursor.

Manage Data:
Delete routes and user charts.



Select a color palette.



MOB:
Mark man overboard position.

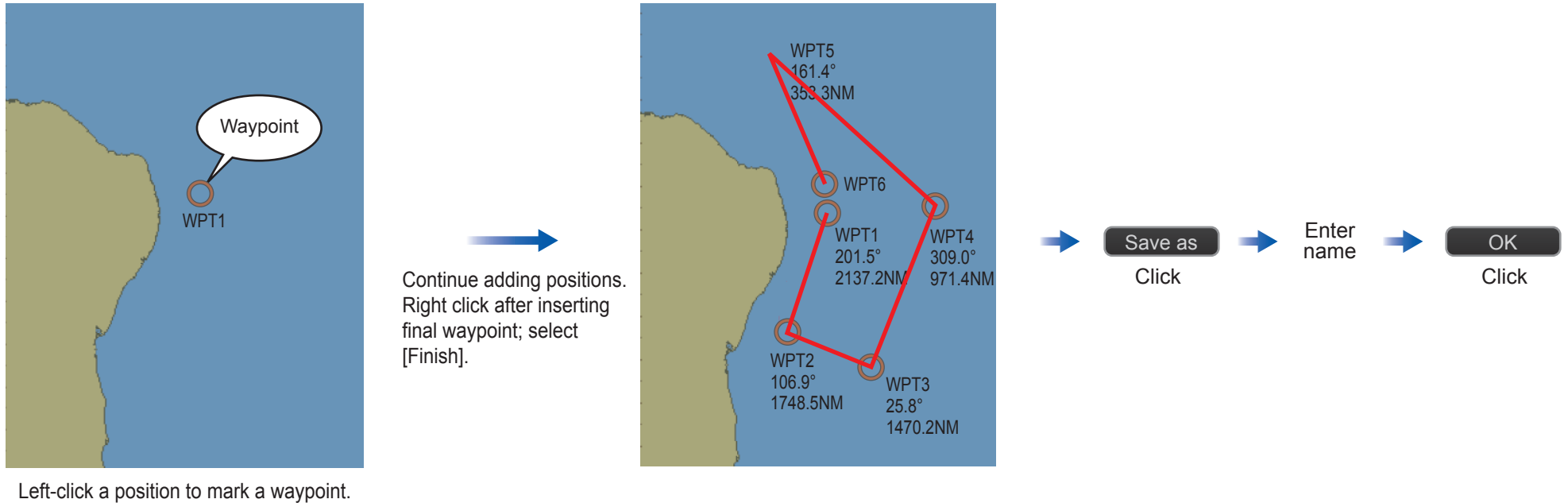
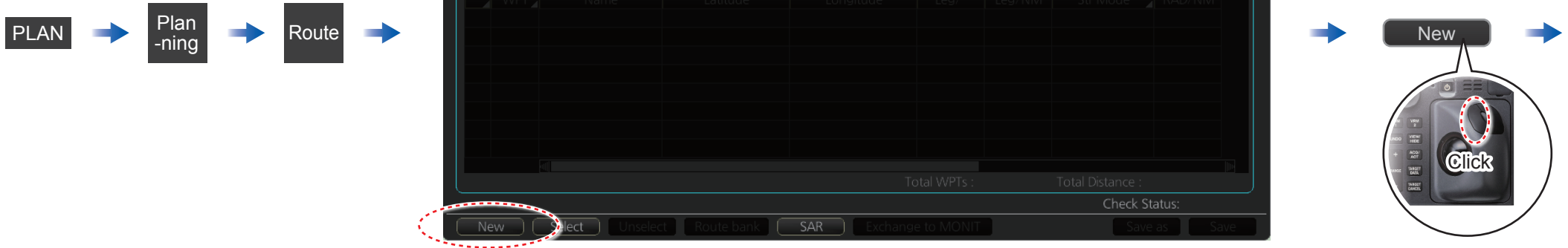
Take a screenshot.

Undo past action.



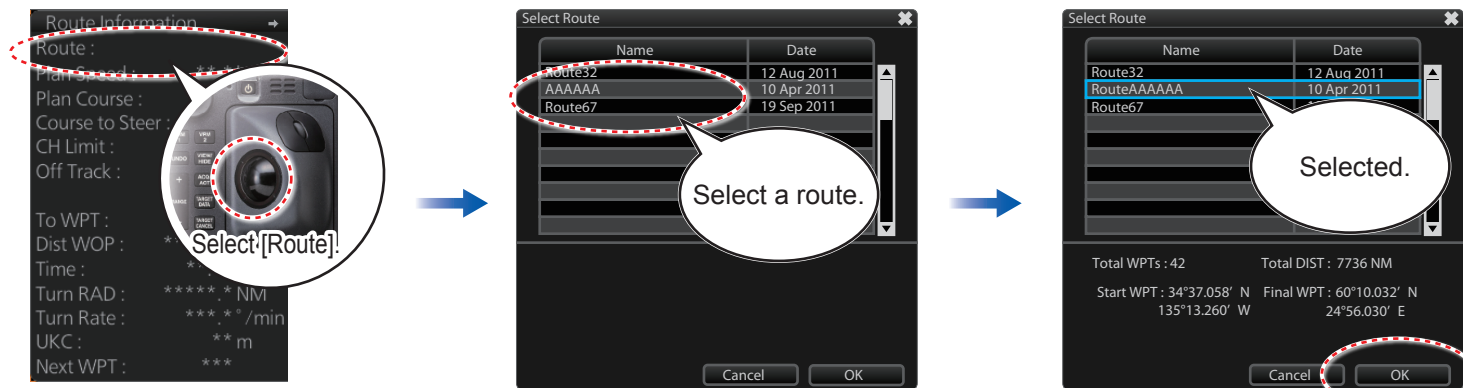
Routes

How to create a route



Routes (con't.)

How to select a route to navigate



To stop navigating a route:

NAVI

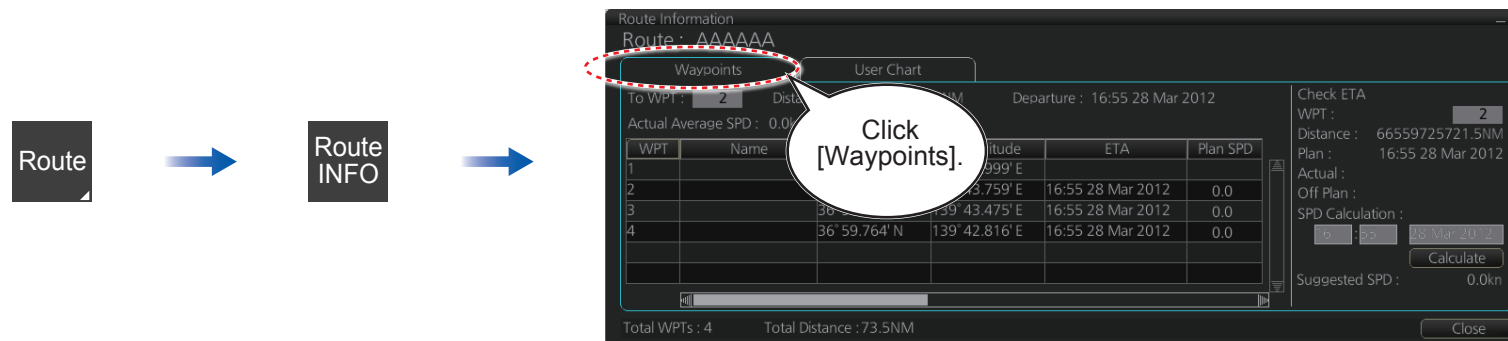


Route

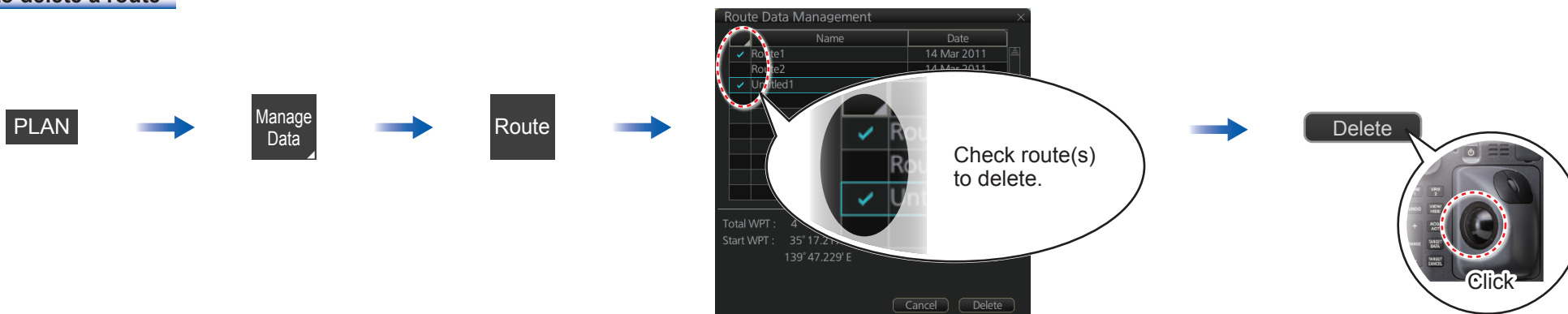


Unselect

How to view route waypoint information



How to delete a route



User Charts

How to create a user chart



Tidal: - Current
- Predicted

Line: - Coast - Route
- NAV - Depth

Tidal: - NMT
- NLT

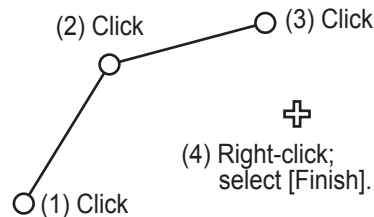
Area

Circle

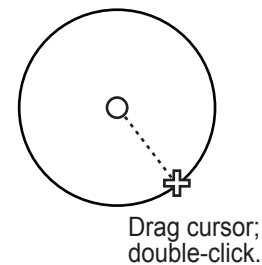
Label

Click object to draw.

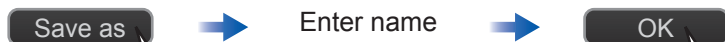
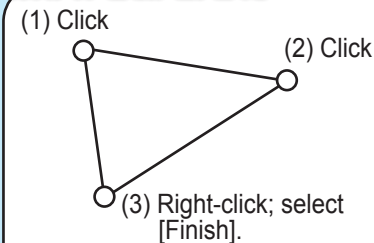
How to draw a line



How to draw a circle

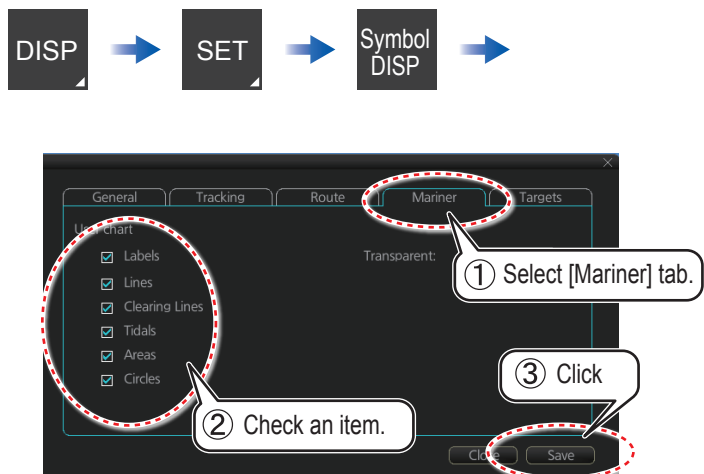


How to draw an area

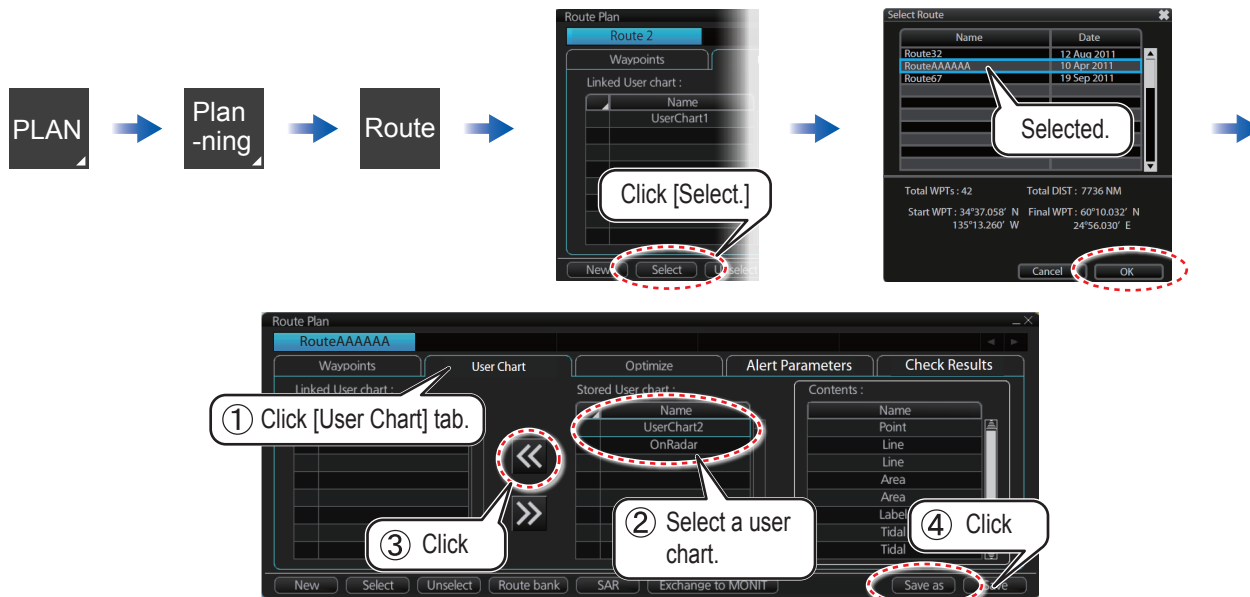


User Charts(con't)

How to select objects to display in user chart

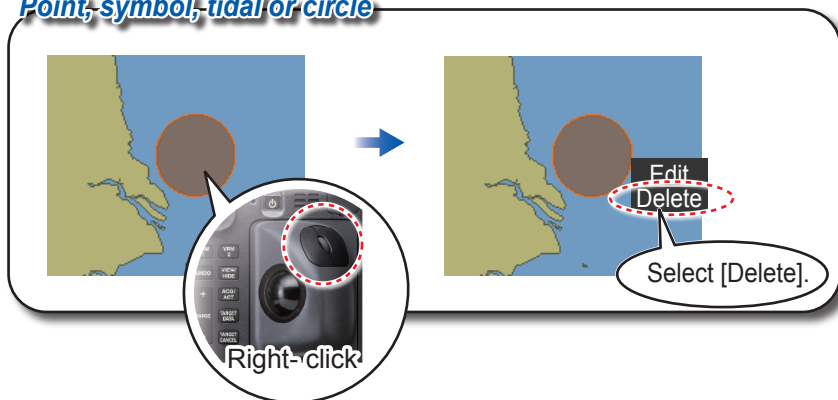


How to link a user chart to a route

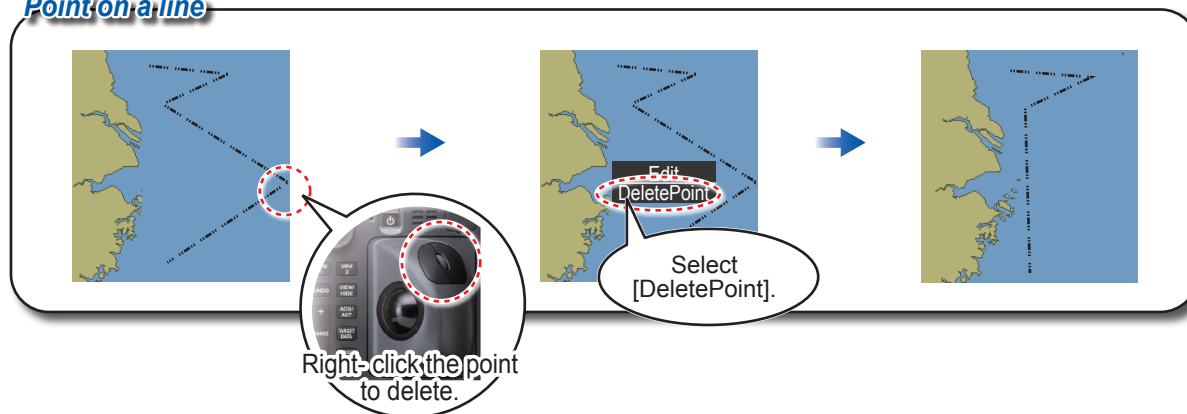


How to delete objects from a user chart

Point, symbol, tidal or circle



Point on a line



How to delete user charts

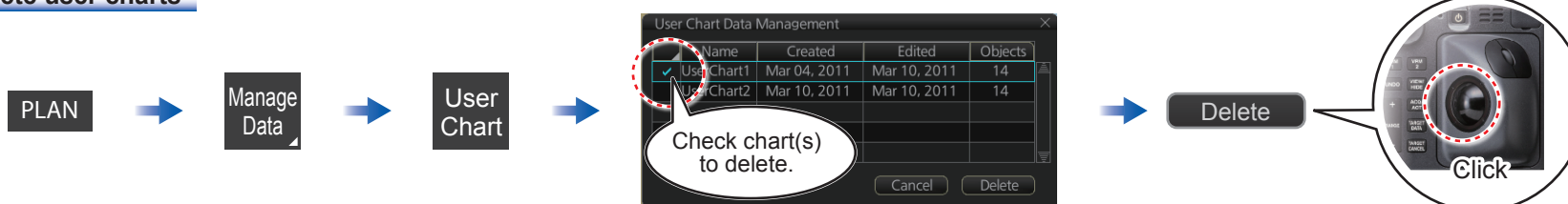


Chart Operations

How to control visibility of chart objects

DISP

SET

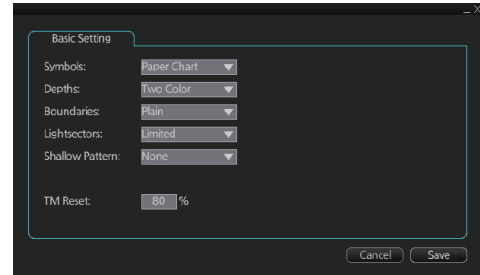
Chart
DISP

Symbol
DISP

Control basic
chart settings

Control chart
objects

Control navigational
features



Basic Setting dialog box. Fields include: Symbols (Paper Chart), Depths (Two Color), Boundaries (Plain), Lightsectors (Limited), Shallow Pattern (None), and TM Reset (80 %). Buttons: Cancel, Save.

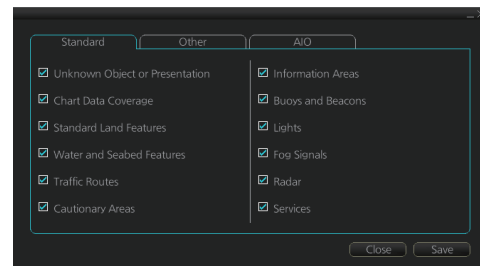


Chart DISP dialog box - Standard tab. Checkboxes: Unknown Object or Presentation, Chart Data Coverage, Standard Land Features, Water and Seabed Features, Traffic Routes, Cautionary Areas. Buttons: Close, Save.

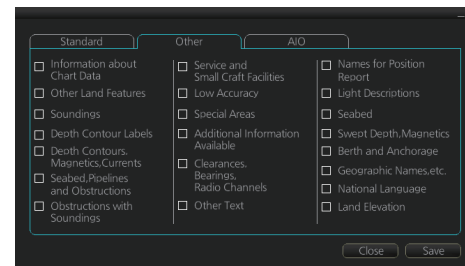
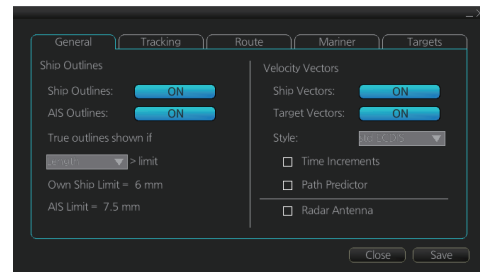
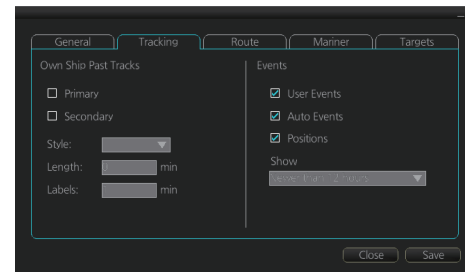


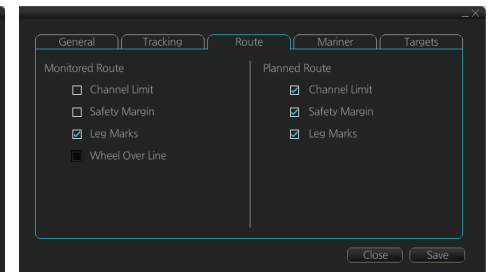
Chart DISP dialog box - Other tab. Checkboxes: Information Areas, Buoys and Beacons, Lights, Fog Signals, Radar, Services. Buttons: Close, Save.



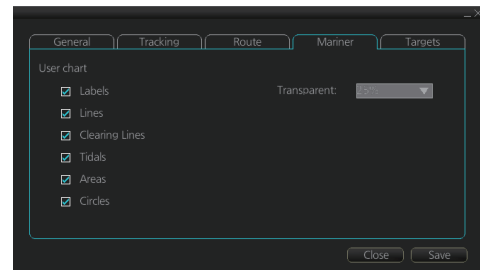
Symbol DISP dialog box - General tab. Ship Outlines: ON, AIS Outlines: ON. True outlines shown if: Limit. Own Ship Limit = 6 mm, AIS Limit = 7.5 mm. Velocity Vectors: Ship Vectors: ON, Target Vectors: ON. Style: Vector. Time Increments, Path Predictor, Radar Antenna. Buttons: Close, Save.



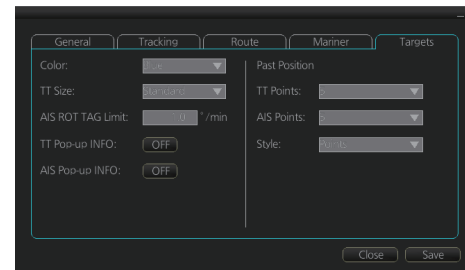
Symbol DISP dialog box - Tracking tab. Own Ship Past Tracks: Primary, Secondary. Style: Vector. Length: 1 min, Labels: 1 min. Events: User Events, Auto Events, Positions. Show: Show Last 10 Events. Buttons: Close, Save.



Symbol DISP dialog box - Route tab. Monitored Route: Channel Limit, Safety Margin, Leg Marks, Wheel Over Line. Planned Route: Channel Limit, Safety Margin, Leg Marks. Buttons: Close, Save.



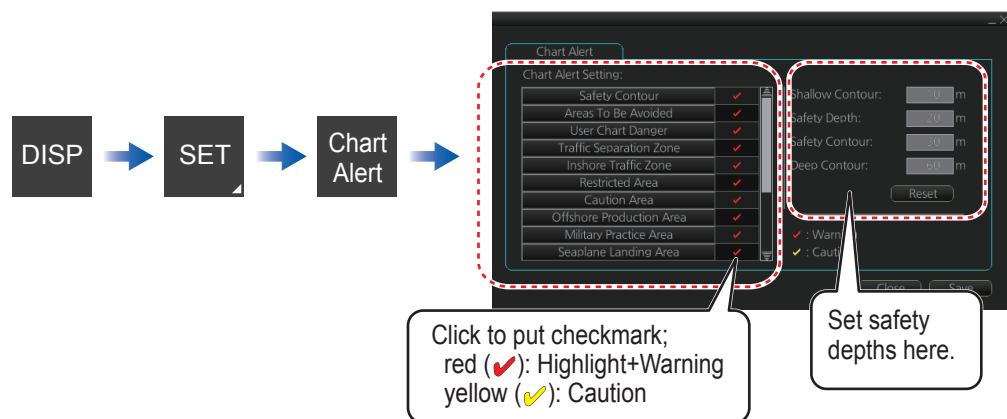
Symbol DISP dialog box - Mariner tab. User chart: Labels, Lines, Clearing Lines, Tidal, Areas, Circles. Transparent: 100%. Buttons: Close, Save.



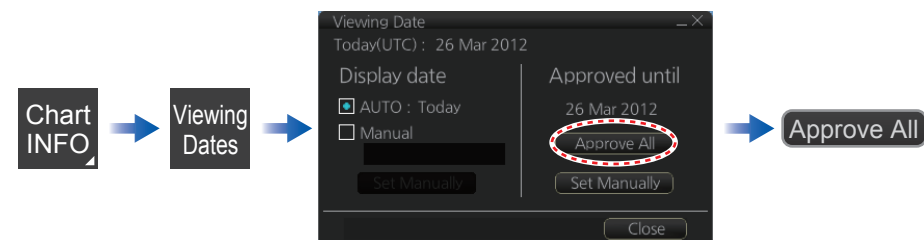
Symbol DISP dialog box - Targets tab. Color: Red. TT Size: Medium. AIS ROT TAG Limit: 100 /min. TT Pop-up INFO: OFF. AIS Pop-up INFO: OFF. Past Position: TT Points, AIS Points, Style: Vector. Buttons: Close, Save.

Chart Operations

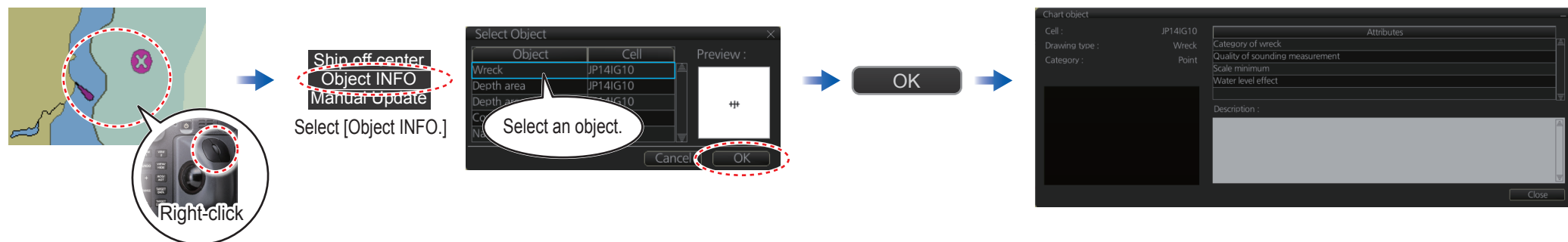
How to set safety contours and chart alerts



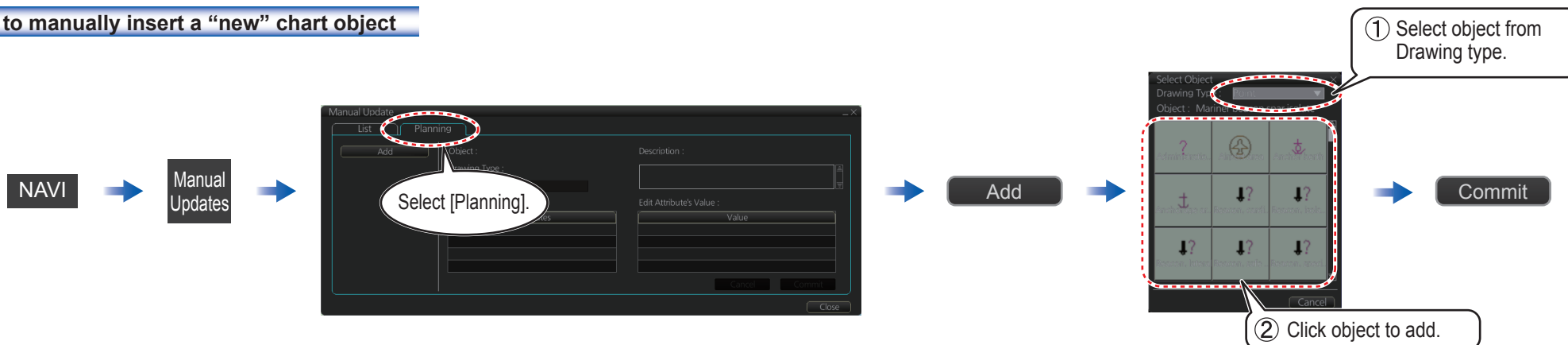
How to set Display date and Approved until dates



How to find chart object information (ENC chart)



How to manually insert a "new" chart object



TT/AIS Operations

How to find target info

Put the cursor on the target and push the left button to show target data.

Title bar: TT Info

TT No.: TT 10

Bearing: BRG 296.4°

Range: RNG 23.700 NM

Course over ground: COG 180.0°

Speed over ground: SOG 15.0 kn

CPA: CPA 12.061 NM

TCPA: TCPA 22:38

Bow cross range: BCR ** **

Bow cross time: BCT ** **

TT symbols (main)

Symbol (Color)	Name
● (Green)	Past position marker
○ (Green)	Target under acquisition
○ (Green)	Acquired target

Title bar: AIS Info

MMSI: MMSI 1003

VESSEL B

Bearing: BRG 153.0°

Range: RNG 96.699 NM

Course over ground: COG 90.0°

Speed over ground: SOG 14.0 kn

CPA: CPA 91.697 NM

TCPA: TCPA 00:31

Bow cross range: BCR 459.35 NM

Bow cross time: BCT 16:52

Position: 34° 17.987' N
140° 36.565' E

CALL2

AIS symbols (main)

Symbol (Color)	Name
● (Green)	Past position marker
△ (Green)	Sleeping AIS target
△ (Green)	Activated AIS target

How to set up TT and AIS on the TT/AIS page in Overlay/NAV Tools box

Overlay / NAV Tools

TT/AIS

TT: OFF

AIS: DISP OFF

Vector: OFF

CPA/TCPA: 0.6NM 3min

AIS CPA: AUTO ACT ALL

Lost TGT: OFF

Past POSN: 1min True-G

Show, hide TT display.

Show, hide AIS display.

Set CPA/TCPA alarm.

Set lost target alarm.

Set vector time.

Select vector reference.

Set conditions for automatic activation of AIS targets whose CPA is within CPA/TCPA setting.

Select reference for past position display.

Show, hide position display.

Vector

(ex. TT)

AUTO ACT ALL

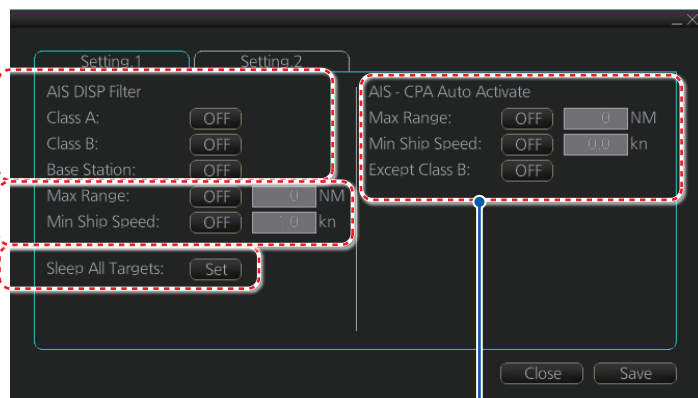
(ex. AIS)

TT/AIS Operations (con't)

Filter AIS targets by target category.

Filter AIS targets by range and speed, length.

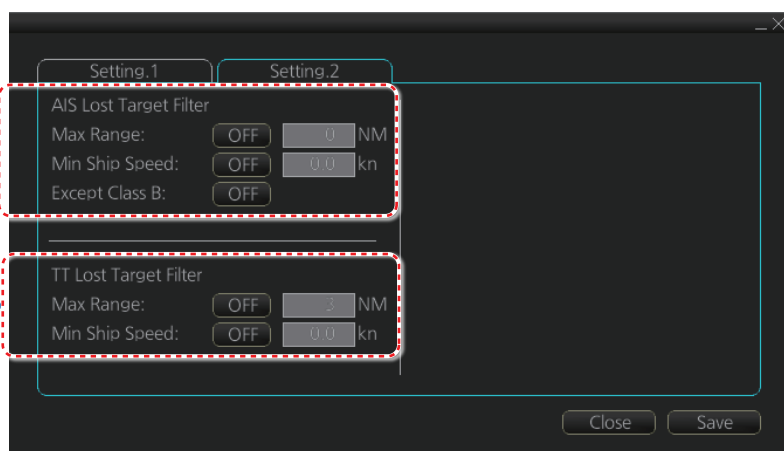
Sleep all activated AIS targets.



Set conditions to activate an AIS target when its CPA is within the CPA alarm setting.

Set the conditions for the AIS lost target filter.

Set the conditions for the TT lost target filter.



Radar Overlay

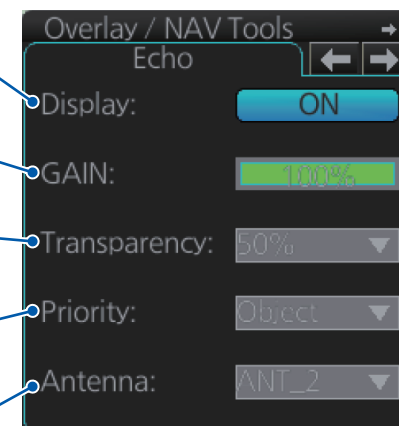
Activate, deactivate the radar overlay.

Adjust the gain of the radar receiver. Put the cursor on the bar then roll the scrollwheel.

Set the degree of transparency for the overlay.

Set the item to display when a chart object and a radar echo share the same position.

Select the antenna to feed the overlay.



Radar echo

