NDB-44

PLOTTER

JMA-5200MK2 Series

INSTRUCTION MANUAL

JRC Japan Radio Co., Ltd.

PRECAUTIONS BEFORE OPERATION

- **Cautions for high voltage**

High voltages from hundreds volts to tens of thousands volts are to be applied to the electronic equipment such radio and radar devices. You do not face any danger during normal operation, but sufficient cares are required for maintenance, inspection and adjustment of their internal components. (Maintenance, check-up and adjustment of the inside of the equipment are prohibited except by maintenance specialists.)

High voltages of tens of thousands volts are so dangerous as to bring an instantaneous death from electric shock, but even voltages of hundred volts may sometimes lead to a death from electric shock. To prevent such an accident, make it a rule to turn off the power switch, discharge capacitors with a wire surely earthed on an end make sure that internal parts are no longer charged before you touch any parts inside these devices. At the time, wearing dry cotton gloves ensures you further to prevent such danger. It is also a necessary caution to put one of your hands in the pocket and not to use your both hands at the same time.

It is also important to select a stable foothold always to prevent additional injuries once you were shocked by electricity. If you were injured from electric shock, disinfect the burn sufficiently and get it taken care of promptly.

- **What to do in case of electric shock**

When finding a victim of electric shock, turn off the power source and earth the circuit immediately.

If it is impossible to turn off the circuit, move the victim away promptly using insulators such as dry wood plate and cloth without touching the victim directly.

In case of electric shock, breathing may stop suddenly if current flows to the respiration center in the brain. If the shock is not so strong, artificial respiration may recover breathing. When shocked by electricity, the victim will come to look very bad with weak pulse or without beating, resulting in unconsciousness and rigidity.

FIRST-AID TREATMENTS

- **First-aid treatments**

As far as the victim of electric shock is not in dangerous condition, do not move him and practice artificial respiration on him immediately. Once started, it should be continued rhythmically.

(1) Do not touch the victim confusedly as a result of the accident, but the rescuer may also get an electric shock.

(2) Turn off the power source calmly and move the victim away quietly from the electric line.

(3) Call a physician or ambulance immediately or ask someone to call a doctor.

(4) Lay the victim on this back and loosen his necktie, clothes, belt, etc.

(5)

a.Examine the victim's pulse.
b.Examine his heartbeat bringing your ear close to his heart.
c.Examine his breathing bringing the back of your hand or your face close to his face.
d.Check the size of the pupils of his eyes.

(6) Open the victim's mouth and take out artificial teeth, cigarette or chewing gum if any. Keep his mouth open, stretch his tongue and insert a towel or the like in his mouth to prevent the tongue from suffocating. (If it is hard to open his mouth due to set teeth, open it with a screwdriver and insert a towel in this mouth.)

(7) Then, wipe his mouth so that foaming mucus does not accumulate inside.

When pulse is beating but breathing has stopped

- **Mouth-to-mouth respiration**

  (1) Tilt the victim's head back as far as this face looks back. (A pillow may be inserted his neck.)

  (2) Push his jaw upward to open his throat wide (to spread his airway).

  (3) Pinch the victim's nostrils and take a deep breath, block his mouth completely with yours and blow into his mouth strongly. Take a deep breath again and blow into his mouth. Continue this 10 to 15 times a minutes (blocking his nostrils).

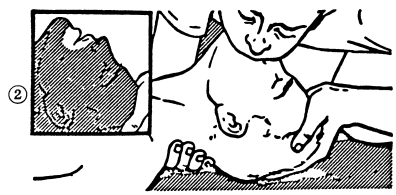
  (4) Carefully watch that he has recovered his natural breathing and atop practicing artificial respiration.

  (5) If it is difficult to open the victim's mouth, insert a rubber or vinyl tube into one of his nostrils and blow into it blocking the other nostril and his mouth completely.

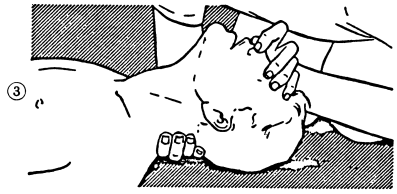
  (6) When the victim recovers consciousness, he may try to stand up suddenly, but let him lie calmly and serve him with a cup of hot coffee or tea and keep him warm and quiet. (Never give him alcoholic drinks.)

- **Method of mouth-to-mouth respiration by raising head**

Raise the victim's head. Support his forehead with one of your hand and his neck with the other hand.
When you tilt his head backward, the victim, in most cases, opens his mouth to the air. This makes mouth-to mouth respiration easy.



Cover his mouth as widely as possible with yours and press your cheek against his nose
or, pinch his nostrils with your fingers to prevent air from leaking.



Blow into his lungs. Continue blowing into his mouth until his breast swells.

Blow into his mouth as quickly as possible for the first 10 times.

Fig.7-1 Mouth-to mouth respiration

When both pulse and breathing have stopped

- **Perform the Cardiac massage.**

When no pulse has come not to be felt, his pupils are open and no heartbeat is heard, cardiac arrest is supposed to have occurred and artificial respiration must be performed.

(1) Place your both hands, one hand on the other, on the lower one third area of his breastbone and compress his breast with your elbows applying your weight on his breast so that it is dented about 2cm (Repeat compressing his breast 50 times or so a minutes). (Cardiac massage)

(2) In case of one rescuer,
Repeat cardiac massages about 15 times and blow into his mouth 2 times quickly, and repeat this combination.
In case of two rescuers,
One person repeats cardiac massages 15 times while the other person blow into his mouth twice, and they shall repeat this combination. (Perform the cardiac massage and mouth-to-mouth respiration)

(3) Examine his pupils and his pulse sometimes. When the both have returned to normal, stop the artificial respiration, serve him with a cup of hot coffee or tea and keep him warm and calm while watching him carefully. Commit the victim to a medical specialist depending on his condition. (Never give him alcoholic drinks.) To let him recover from the mental shock, it is necessary for persons concerned to understand his situations and the necessary treatment.

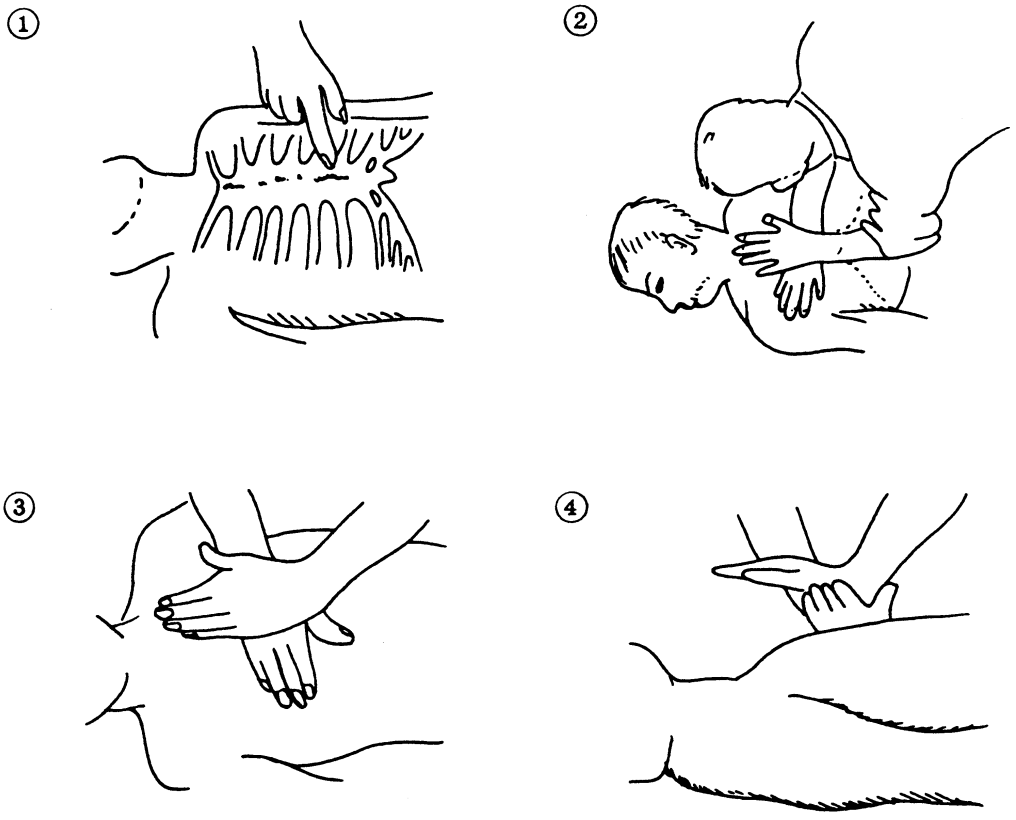


Fig.7-2 Cardiac massage

PREFACE

Thank you very much for purchasing the plotter NDB-44 for the JRC marine radar.

This optional plotter is to be embedded into equipment of the JMA-5200MK2 radar series for use.

- **Before operating the equipment, make sure to read this instruction manual carefully for correct operation.**

- **This instruction manual illustrates only plotter operations. For radar operations, refer to instruction manuals JMA-5212, and JMA5222.**

- **Retain this instruction manual and refer to it when there are points to be clarified or when trouble occurs.**

- **Pictorial Indication**

Various pictorial indications are included in this manual and are shown on these equipment so that you can operate them safely and correctly and prevent any danger to you and/or to other persons and any damage to your property during operation. Such indications and their meanings are as follows.

Please understand them before you read this manual:

⚠ DANGER	This indication is shown where incorrect equipment operation due to negligence may cause death or serious injuries.
⚠ WARNING	This indication is shown where any person is supposed to be in danger of being killed or seriously injured if this indication is neglected and these equipment are not operated correctly.
⚠ CAUTION	This indication is shown where any person is supposed to be injured or any property damage is supposed to occur if this indication is neglected and these equipment are not operated correctly.

- **Examples of Pictorial Indication**

Electric Shock

The?mark represents CAUTION (including DANGER and WARNING).
Detailed contents of CAUTION (“Electric Shock” in the example on the left.) is shown in the mark.

Disassembling Prohibited

Prohibited

The ⃠ mark represents prohibition.
Detailed contents of the prohibited action (“Disassembling Prohibited” in the example on the left.) is shown in the mark.

Disconnect the power plug

Instruction

The • mark represents instruction.
Detailed contents of the instruction (“Disconnect the power plug “ in the example on the left.) is shown in the mark.

- **Warning Label**

There is a warning label on the top cover of the equipment.
Do not try to remove, break or modify the label.

Cautions during operation

⚠ DANGER

Never overhaul or repair the unit by yourself.
Overhauling or repairing the unit by any person other than authorized serviceengineers could result in fires or electrical shocks.
If overhauling or repair of the unit is required, contact our Sales Department or localoffice or your nearest dealer.

⚠ WARNING

Do not remove the cover of this set.
Otherwise, you may touch a high-voltage part and suffer from an electrical shock.

Do not disassemble or modify this set.
Otherwise, a fire, an electrical shock, or a failure may occur.

Do not place a vessel containing water, etc. or a metallic object on this set.
When water spills or when water or the object enters the set, a fire, an electricalshock, or a failure may occur.

Do not insert or remove the power cord or operate switches with a wet hand.
Otherwise, you may suffer from an electrical shock.

Do not damage, break or modify the power cord.
When a heavy object is placed on the cord or the cord is heated, pulled, or forciblybent, the cord will be broken resulting in a fire or an electrical shock.

Do not use this set at a voltage other than the supply voltage stated on the set.
Otherwise, a fire, an electrical shock, or a failure may occur.

⚠ WARNING

In the event that you spill or drop any liquids or metals etc., turn off the main unit,unplug the power supply terminal, and contact our company, branch, or local office.
Continuing operation as is may cause a fire, electric shock or malfunction.

In the event that smoking or burning odors are detected, immediately terminateoperation of the set and contact your dealer.
Continuing operation as is may cause a fire or electrical shock. Never attempt toservice the interior of this set.

Before removing or inserting the cable connector to peripheral equipment, be sureto turn the power switch off.
Use with the cable connector connected might cause fire or electric shock.

Do not operate this unit during controling boat.
Otherwise, marine accident may occur.

This unit incorporates a high-energy-density lithium battery. This battery couldexplode when short-circuited, given physical shock, or wetted.
When disposing of this unit, be sure to contact your dealer or our local office toremove and store the lithium battery.
If you remove and store the lithium battery by yourself, it could produce heat,explode, and /or produce fire when short-circuited,given physical shock, or wetted.

⚠ CAUTION

Please assign the electrical work for the set to our marketing dept, our branch ormarketing office that is nearest to you.
Any electrical work by any person other thanour specialized maintenance persons may cause malfunction of this set.

Do not use or leave alone this set at any place where the LCD is exposed to directsunlight for a long time or the temperature rises above 55 ℃ .
Otherwise, amalfunction or defect may occur.

⚠ CAUTION

	Do not place the set in an unstable position such as on a shaking stand or tiltingplace. Otherwise, this set may drop or turn over resulting in an injury.
	Do not bring the set in a cooled state abruptly into a warm room. A high voltage may leak due to dew condensation resulting a failure. In this case, usethe set after leaving it alone for 30 min.
	When installing this set, be sure to connect the grounding wire to the groundingterminal of the set. Otherwise, you may suffer an electrical shock durning a failure or leak.
	When removing the power cord, be sure to remove the power cord terminalcorrectly. If the power cord is pulled, the cord may be damaged resulting in a fire oran electrical shock.
	Do not close the ventilation port of the set. Otherwise, the set that is heated may cause a fire or failure.
	When the set is unused for a long period, be sure to turn off the powe switch of theset and then remove the power code to assure safety.
	This device is only an aid to navigation. • The information displayed by the unit cannot be directly used for navigationpurposes.It must be used together with the appropriate marine charts. • The unit does not automatically assess position information. It is the user's responsibility to judge position and navigational information.
	Do not touch the unit with hands or gloves made wet with fresh water or salt water.Doing so might cause electric shock or malfunction,
	If an invalid number is entered, the JLZ-700 will not convert the latitude and longitude of the current position or cursor position into a correct time difference or LOP. This may lead to erroneous positioning, resulting in a fatal disaster. Be sure to verify that the values you entered are all correct. Also verify that the converted values are also valid and correct.

⚠ CAUTION	
❗	A latitude/longitude correction will cause the current position and associated numbers to be displayed with some difference from the actual position. Keep this difference in mind, when manipulating your boat, looking around your boat, to avoid accidents.
❗	Shifting a coast line on the map will result in a difference between the actualposition of the caost and its position on the map. Keep this difference in mind whenmagnipulating your boat, looking around your boat. Also inform your users of thisfact.

- **Our contacts**

See the back cover of this manual.

GLOSSARY
(DESCRIPTION OF IMPORTANT WORDS)

ERC card :It is a card issued by the Japan Hydrographic Association to be used to display hydrographic maps.

Event mark :It is an X, Y, or Z mark put on a track. A single button operation can mark where fishing has been conducted.

Cursor :It is a + shaped mark. It is moved by the trackball, and is used to input or delete marks.

Card initialization :When using a new memory card (CDD-611), initialization makes the card writable.

Card 1 and card 2 :Card 1 is the card inserted in the lower card slot.
Card 2 is the card inserted in the upper card slot.

Sea route in sequence / in reverse sequence

:Sea route in sequence	Destinations change in the order of input.
Sea route in reverse sequence	Destinations change in the reverse order of input.

Sea route skip / back skip
:Sea route skipSpecify the destination after the next destination.
Sea route back skipSpecify the destination before the next destination.

Course-up :In this display method, the course will be shown on the top of the screen. The ship can be navigated as if using the radar.

C-MAP :It is a card manufactured by C-MAP to be used to display hydrographic maps.

JRC card :It is a coastline ROM card manufactured by JRC to be used to display coastlines.

Number mark :It is a number mark such as ①②…⑨ to be used to differentiate and mark where fishing has been conducted. Its function is similar to that of the mark described below.

Scale bar :It is used to show distance and is displayed on the screen.

Tideway vector :It is a linear presentation of the velocity and direction of a tideway.

DGPS :It is a GPS with much improved accuracy and is short for differential GPS.

Trackball :It is a ball located on the right side of the keyboard and is used to move the cursor.

Sea route between two points
:It is a sea route having only two points: origin and destination

North-up :In this display method, the top of the screen points to the north. It is one of the hydrographic map display methods.

File :It is a set of tracks, marks, destinations, and sea routes saved onto a memory card. Use a name to differentiate files.

Font :It is a type of display data corresponding to the shape of each mark.

Plot screen :It is a screen where shorelines, tracks, marks, and the coordinates of the position are displayed.

Marker :It is a ⚓ -shaped mark to be put on the track. Distance and azimuth to the ship are displayed on the right hand side of the screen. This marker can be used when throwing and collecting a barrel.

Mark	:It is in the shape of fish, sunken ship, fish-breeding reef, +, X, or Y to show where fishing has been conducted, a sunken ship is located, or a fish-breeding reef can be found. Use the cursor to input / delete a mark.
Memory card	:It is a card to save tracks and marks saved in the plotter.
Write protect	:This function protects the content stored on a memory card. Fold the tab on the card to the direction shown by an arrow.
Line	:It defines a prohibited area or a warning line.

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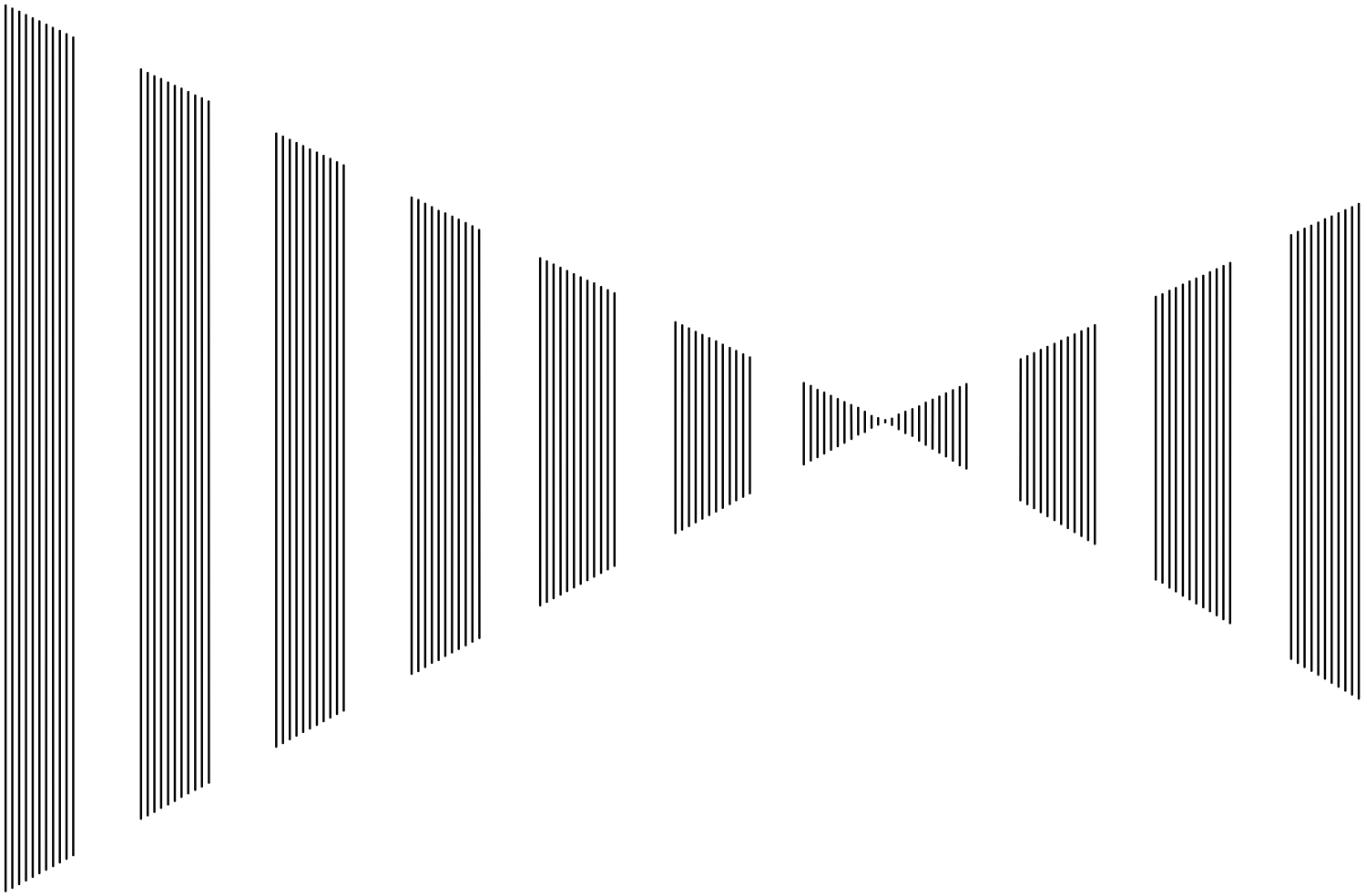
5 AFTER-SALES SERVICE

6 DISPOSAL

7 SPECIFICATIONS

SECTION 1
GENERAL AND EQUIPMENT COMPOSITION



1.1 FUNCTIONS

(1) There are three display modes: radar mode, synthesis mode, and plotter mode. The plotter function can be used in synthesis and plotter modes.

(2) By connecting the equipment to GPS navigation equipment or loran navigation equipment, the latitude line, the longitude line, and the continuous track can be drawn in colored lines.

(3) Tracks can be displayed in different colors or deleted. This is a very useful function since this allows intuitive understanding of the operation status.

(4) Locations of destinations and passing points can be stored (by using marks such as dangerous locations, shallow and fish-breeding reefs) and displayed in colors.

(5) Distance and azimuth between the current position and the destination that change by the minute can be automatically displayed.

(6) Sea area display can be scaled for various applications (in plotter mode).

1.2 FEATURES

(1) Detailed shoreline data and location names can be displayed, and the current position can be easily checked. In synthesis mode, radar images and shoreline data can be superimposed onto each other for display.

(2) Electronic Reference Charts (ERC) by Japan Hydrographic Association can be displayed.

(3) Fishing ground data can be stored and displayed as marks of various types with a single button operation. These marks can be effectively used in later operation or easy data organization.

(4) Fast data display will allow scaling and shifting of shoreline data or fishing ground data, thus allowing easy searches for a fishing ground.

(5) An 15-inch TFT color LCD allows bright and easy-to-see display.

(6) Net-casting point can be stored by a single button action, and the azimuth and distance to the point can be immediately displayed. Therefore, it is easy to return to the net-casting point.

(7) Tracks can be stored and displayed in different colors for each range of water temperature and water depth. This will allow intuitive understanding of the fishing ground status.

(8) Track colors and mark colors can be easily specified with the multi-dial.

(9) A memory card, which requires no battery replacement, can automatically store up to 20,000 tracks and marks. It can save a large volume of valuable data safely.

(10) A JRC differential receiver can be directly connected for high-accuracy position fixing in units of a few meters.

1.3 CONFIGURATION

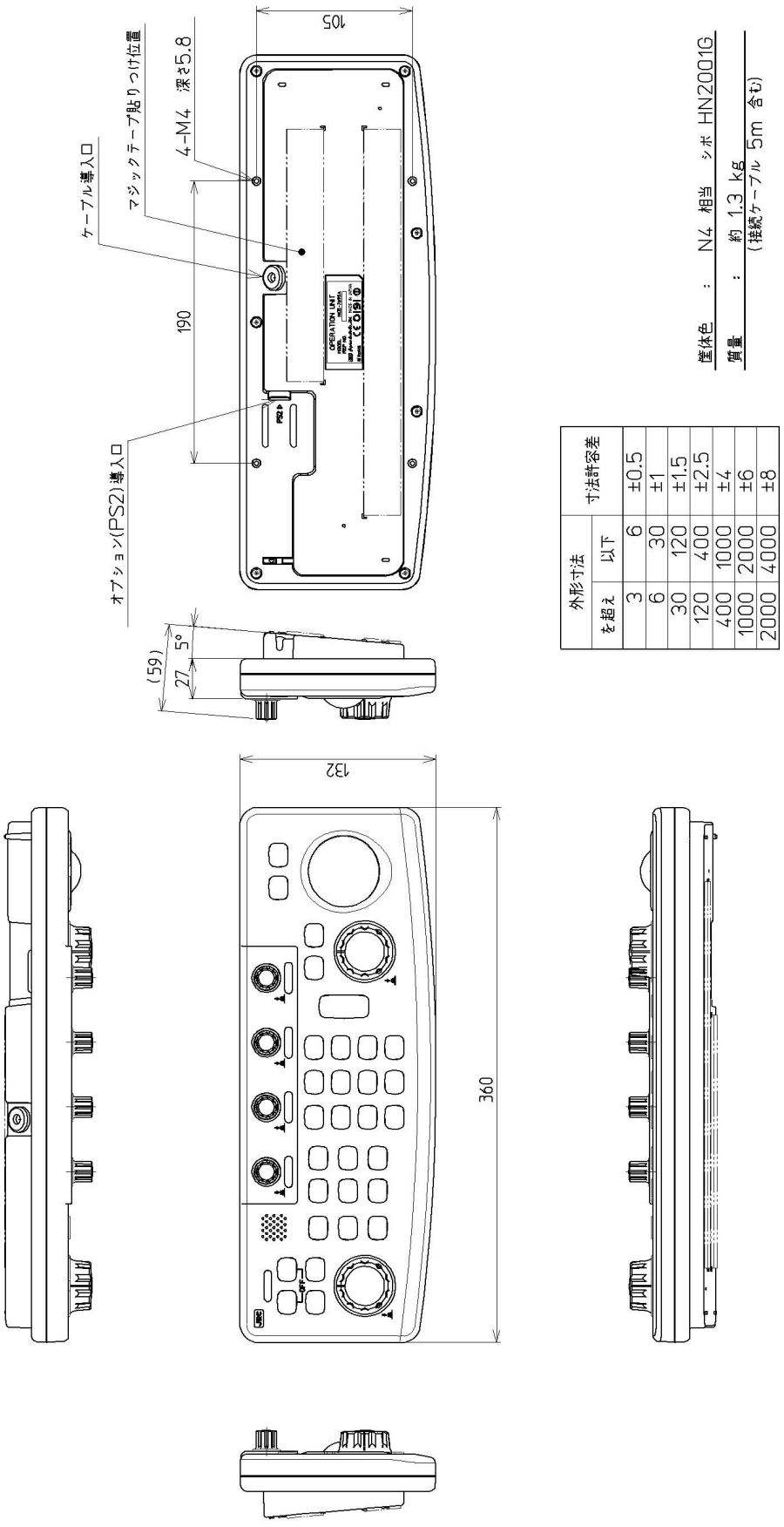
Configuration of this equipment is as follows:

Part name	Model	Amount	Remarks
RADAR Process Unit	NCZ-1560	1	
Operation Unit	NCE-7699A	1	
Power cable	CFQ-6912	1	5m
Instruction manual	7ZPRD0716	1	

Options

Part name	Model	Amount	Remarks
Coastline Card	CDD-612***	1	*** depends on regions
Memory card	CDD-611	1	

1.4 STRUCTURE

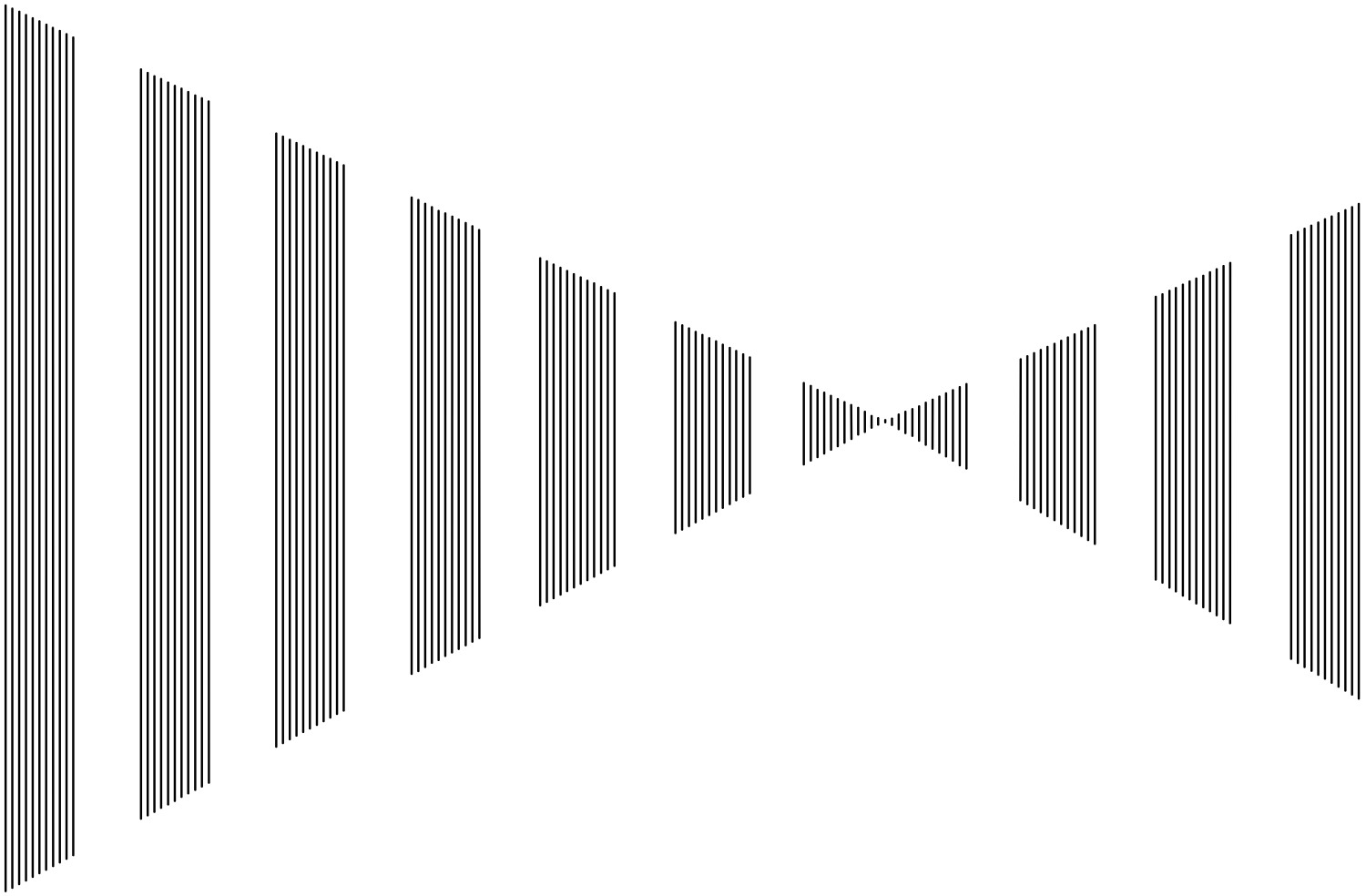


外形寸法		寸法許容差
を超え	以下	
3	6	±0.5
6	30	±1
30	120	±1.5
120	400	±2.5
400	1000	±4
1000	2000	±6
2000	4000	±8

Fig.1-1 Outline drawing of NCE-7699A Operation Unit

SECTION 2

NAMES AND FUNCTIONS OF CONTROL PANEL KEYS AND MENU STRUCTURE



2.1 NAMES AND FUNCTIONS OF CONTROL PANEL KEYS

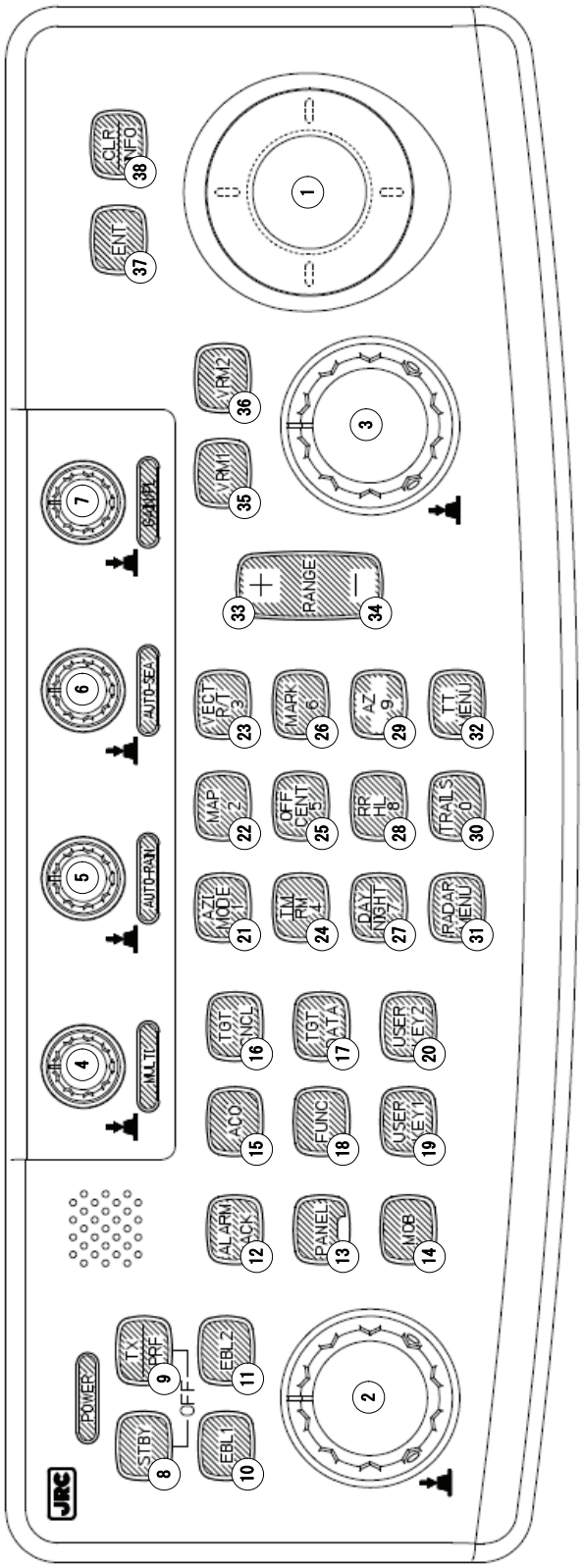


Fig.2-1 Operation Unit NCE-7699A

Each key functions differently in synthesis mode and plotter mode.
Refer to the following table for key functions in each mode.

No.	Operation Unit	Function	
		Synthesis mode	Plotter mode
1	Trackball	• Moves the cursor • Specifies floating EBL and off-centering position	• Moves the cursor • Shift to a different sea area
2	EBL	• Rotates the EBL azimuth • Pressing down the dial switches between center lock and floating	
3	VRM	• Changes the VRM distance	
4	MULTI	• Change setting values for registered items • Pressing down the dial switches between items	• Changes colors of own ship's track and marks • Pressing down the dial switches between the track color setting items and mark color setting items
5	AUTO-RAIN	• Suppress images by rain / snow clutter • Press the dial to switch the mode to manual / automatic	
6	AUTO-SEA	• Suppress images by sea clutter. • Press the dial to switch the mode to manual / automatic	
7	GAIN / PL	• Adjust the reception gain of the radar • Press the dial to switch the transmitting pulse length	
8	STBY	• Switch the equipment from a transmitting state to a standby state.	
9	TX/PRF	• If this key is pressed subsequently, transmission starts • If this key is pressed during transmission, fine adjustments of the transmission repetition frequency are enabled	• Switches to transmit mode and then enters radar mode
10	EBL1	• Switches between display and non-display of EBL1 • Holding down the button for more than 2 seconds calls up the EBL/ Cursor Setting menu	
11	EBL2	• Switches between display and non-display of EBL2 • Holding down the button for more than 2 seconds calls up the EBL/ Cursor Setting menu	
12	ALARM ACK	• Stops the alarm	• Stops the alarm
13	PANEL	• Adjust brightness of the operation panel	• Adjust brightness of the operation panel

No.	Operation Unit	Function	
		Synthesis mode	Plotter mode
14	MOB	• Put a marker on the current position of own ship • Holding down the button for more than 2 seconds deletes the marker	• Put a marker on the current position of own ship • Holding down the button for more than 2 seconds deletes the marker
15	ACQ	• TT (Target Tracking) manual acquisition of the target at the cursor	
16	TGT CNCL	• Deletes tracked target symbol of the target currently being tracked • Holding down the button for more than 2 seconds cancels all tracked target	
17	TGT DATA	• Displays numerical data of tracked target or AIS target currently being displayed	• Displays numerical data of AIS target currently being displayed
18	FUNC	• Calls up the signal processing settings • Holding down the button for more than 2 seconds calls up the function settings menu	
19	USER KEY 1	• Allocate one of the following functions: menu, zoom, scale, DEST (destination), O-> , ->O , <=>, or Screen Capture	• Allocate one of the following functions: menu, zoom, scale, DEST (destination), O-> , ->O , <=>, or Screen Capture
20	USER KEY 2	• Allocate one of the following functions: menu, zoom, scale, DEST (destination), O-> , ->O , <=>, or Screen Capture	• Allocate one of the following functions: menu, zoom, scale, DEST (destination), O-> , ->O , <=>, or Screen Capture
21	AZI / MODE 1	• Switches screen display methods among north-up, head-up, and course-up	• Switches screen display methods among north-up, distination-up, head-up, and course-up
22	MAP 2	• Switches modes among radar mode, synthesis mode, and plotter mode	• Switches modes among radar mode, synthesis mode, and plotter mode
23	VECT R/T 3	• Switches the tracked target vector display between true vector and absolute vector	
24	TM / RM 4	• Switches screen display between true motion display and relative motion display	• Switches screen display between true motion display and relative motion display
25	OFF CENT 5	• Moves the own ship's current position to within 66% of the radius • Holding down the button moves the current ship position to the center of the screen	• Moves and displays the cursor position at the center of the screen • Holding down the button moves the current ship position to the center of the screen
26	MARK 6	• Switches on or off the display of marks, lines, and tracks • Holding down the button calls up the mark menu	• Switches on or off the display of marks, lines, and tracks • Holding down the button calls up the mark menu

No.	Operation Unit	Function	
		Synthesis mode	Plotter mode
27	DAY / NIGHT 7	• Changes colors and brightness of the screen	• Changes colors and brightness of the screen
28	RR / HL 8	• Hides the ship's heading line while the button is being held down • Switches be turn display and non-display of range rings each time the button is pressed	• Hides the ship's heading line while the button is being held down
29	AZ 9	• Sets an alarm area in the displayed screen	
30	TRAILS 0	• Changes radar tracking duration	
31	RADAR MENU	• Displays the radar menu	• Displays the radar menu
32	TT MENU	• Displays the TT menu	• Displays the TT menu
33	+ RANGE	• Expands the observation range	• Scales down the image
34	RANGE -	• Shrinks the observation range	• Scales up the image
35	VRM1	• Switches between display and non-display of VRM1	
36	VRM2	• Switches between display and non-display of VRM2	
37	ENT	• Confirms menu selection • Confirms numerical value input • Enters marks and lines	• Confirms menu selection • Confirms numerical value input • Enters marks and lines
38	CLR / INFO	• Cancels menu selection • Cancels numerical value input • Deletes marks and lines	• Cancels menu selection • Cancels numerical value input • Deletes marks and lines

Screen display examples

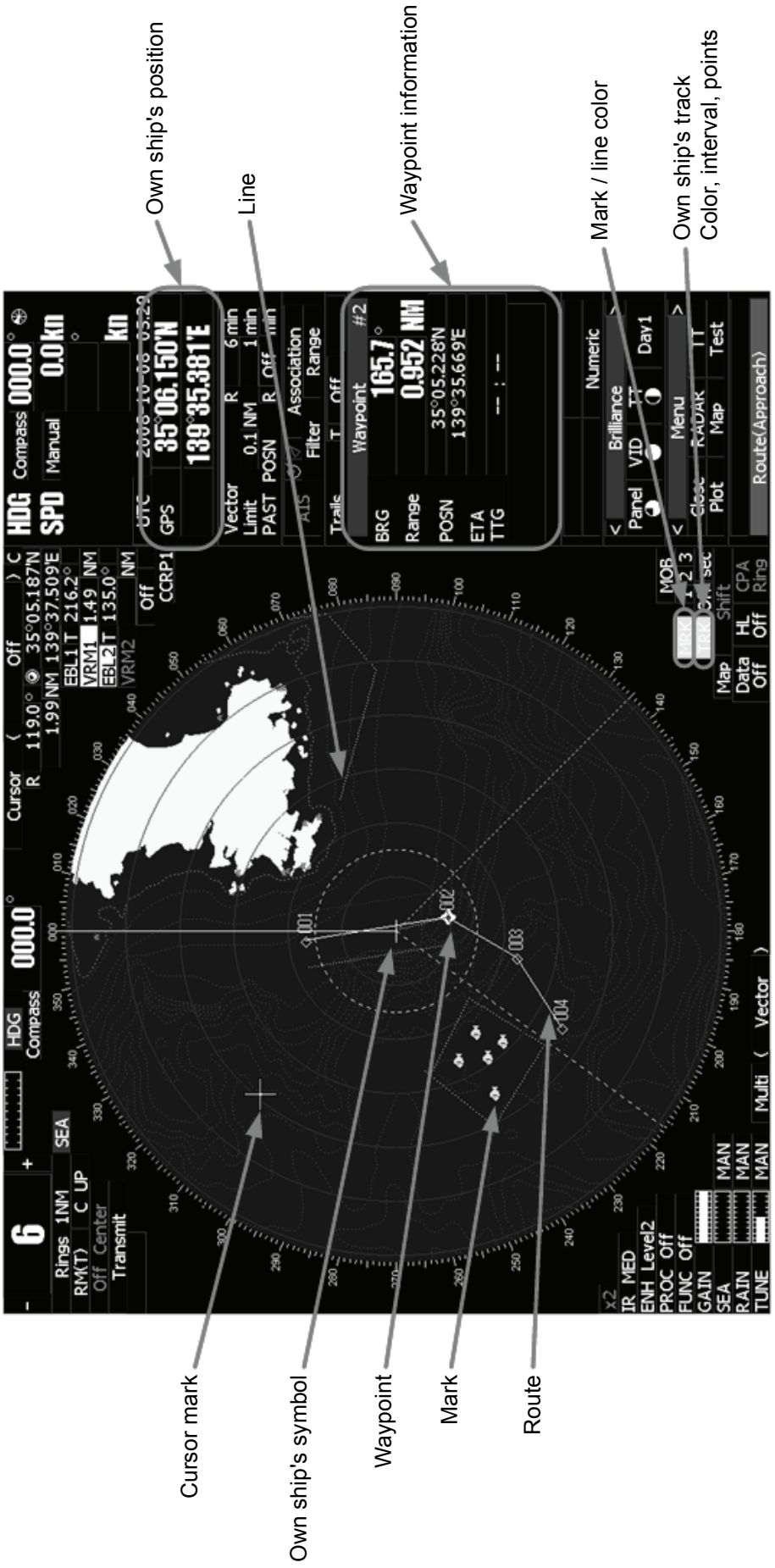


Fig.2-2 Synthesis mode

Fig.2-3 Plotter mode

2.2 MENU STRUCTURE

For this equipment, there are functions to be activated by the panel keys, and also functions to be activated from the menu. Use either the trackball or number keys ([0] to [9]) in combination with the [ENT] key and the [CLR/INFO] key to select menu items and make the settings.

Follow the procedure below to call up the plotter-related menu:

Press the [RADAR MENU] key.
Press the [9] key.

The plotter menu will then be displayed.

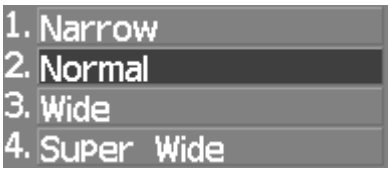
2.2.1 Selecting an Menu Item

- **When selecting an item in the menu, press the number key on the keyboard that corresponds to the item number, or use the trackball and put the cursor onto the item you wish to choose. Then, press the [ENT] key on the keyboard.**

- **Changing the settings for each item**

  Making changes by selection

  Press the number key on the keyboard that corresponds to the number you wish to choose, or use the trackball and put the cursor onto the number you wish to choose. Then, press the [ENT] key on the keyboard.



  Making changes by number input

  There are three ways to input numbers:

  - Use the number keys on the keyboard to directly input values.
  - Turn the [MULTI] dial to change values.
  - Put the cursor on the number buttons on the screen, and press the [ENT] key on the keyboard to enter values.

  After entering values, put the cursor on the ENT button on the screen, and then press the [ENT] key on the screen to confirm the selection. Inputted values can be canceled by pressing the CLR button on the screen or [CLR/INFO] key on the keyboard

2.2.2 Menu List

Main Menu
- 3. Marker Setting
  - 1. EBL1 Setting
    - 1. EBL1 Bearing REF
    - 2. EBL1 Floating
    - 3. EBL1 Bearing Fix
  - 2. EBL2 Setting
    - 1. EBL2 Bearing REF
    - 2. EBL2 Floating
    - 3. EBL2 Bearing Fix
  - 3. VRM1 Range Unit
  - 4. VRM2 Range Unit
  - 5. Parallel Line
    - 1. Operation Mode
    - 2. Parallel Cursor
      - 1. Range Scale Link
      - 2. Referece Bearing
      - 3. Floating
      - 4. Bearing Mode
      - 5. DISP For Individual Line
        - 1. Line 1
        - 2. Line 2
        - 3. Line 3
        - 4. Line 4
        - 5. Line 5
        - 6. Line 6
        - 7. Line 7
      - 6. Bearing
      - 7. Interval
    - 3. Parallel Index Line
      - 1. Range Scale Link
      - 2. Referece Bearing
      - 3. Floating
      - 4. Bearing Mode
      - 5. DISP For Individual Line
        - 1. Line 1
        - 2. Line 2
        - 3. Line 3
        - 4. Line 4
      - 6. Bearing
      - 7. Distance

Main Menu
- 3. Marker Setting
  - 6. Cursor Setting
    - 1. EBL/VRM Control CURS
    - 2. Cursor Length
    - 3. Cursor Pattern
    - 4. Distance Unit Simultaneity
  - 7. EBL Maneuver Setting
    - 1. EBL Maneuver
    - 2. Reach
    - 3. Turn Mode
    - 4. Tuen Set
  - 8. Rectangle Cursor
    - 1. Rectangle Cursor Display
    - 2. Make Rectangle Cursor
    - 3. ENT
    - 4. Unit Of Distance

Main Menu
- 4. Screen Setting
  - 1. Display Color Setting
    - 1. Day/Night
    - 2. Own Ship
    - 3. Outer PPI
    - 4. Inner PPI
    - 5. Character
    - 6. RADAR Echo
    - 7. RADAR Trails(Time)
    - 8. RADAR Trails(All)
    - 9. TT/AIS
  - 2. Brilliance Setting
    - 1.RADAR Video
    - 2. RADAR Trails
    - 3. TT/AIS
    - 4. Range Riings
    - 5. EBL/VRM
    - 6. Character
    - 7. Panel
    - 8. Own Ship
  - 3. Graph Panel Setting
    - 1. Panel1(Target)
    - 2. Panel2(Marker)
    - 3. Panel3(Waypoint)
    - 4. Panel4(Cursor/EBL/VRM)
    - 5. Panel5(Graph)
  - 4. Depth Graph Setting
    - 2. Depth Range
    - 3. Time Range
    - 4. Depth Unit
  - 5. Wind Graph
    - 2. Wind Speed Unit
  - 6. DIR/DIST EXP Display
  - 7. TEMP Graph Setting
    - 2. Display Graph Color
    - 3. Water TEMP Range
      - 1. Temperature setting（MIN）
      - 2. Temperature setting
      - 3. Temperature setting
      - 4. Temperature setting
      - 5. Temperature setting
      - 6. Temperature setting（MAX）
    - 4. Time Range

Main Menu
|- 4. Screen Setting
|- 8. Course Bar Setting
| |- 2. Autopilot Course
| |- 3. ROT Scale
|
|- 9. Next
|
|- 1. Screen Capture Setting
|- 1. Select Capture Item
| |- 1. Radar Echo
| |- 2. Trails
| |- 3. Chart
| |- 4. Graphic
|
|- 2. File Erase
|- 3. AUTO Capture Interval
|- 4. AUTO File Erase

Main Menu
- 5. TXRX Setting
  - 1. PRF Fine Tuning
  - 2. Stagger Trigger
  - 4. PRF
  - 5. Band Select
  - 6. Inter Switch Setting
    - 1. Select TXRX
  - 7. Pulse Length Pattern
    - 1. 3NM
      - 1. 10kw
    - 2. 6nm
    - 3. 12NM
    - 1. 3NM
      - 1. 25kw
    - 2. 6nm
    - 3. 12NM
    - 1. 3NM
      - 1. 6kw

Main Menu
- 6. NAV Information
  - 1. Waypoint Display
  - 2. NAV Display Setting
    - 1. Line1
    - 2. Line2
    - 3. Line3
    - 4. Mark1
    - 5. Mark2
    - 6. Mark3
    - 7. Mark4
  - 3. User Map Setting
    - 1. Own Ship Position
    - 2. Load
      - 1. Device
      - 2. Load User Map
    - 3. Unload
    - 4. Save
      - 1. Device
      - 2. Save User Map
      - 3. All Files to Card2
    - 5. Erase
      - 1. Device
      - 2. Erase User Map

Main Menu
- 6. NAV Information
  - 3. User Map Setting
    - 6. Edit User Map
      - 1. Clear Map Obuject
        - 1. Line1
        - 2. Line2
        - 3. Line3
        - 4. Mark1
        - 5. Mark2
        - 6. Mark3
        - 7. Mark4
        - 8. All
      - 2. Make Map Object
        - 1. Line1
        - 2. Line2
        - 3. Line3
        - 4. Mark1
        - 5. Mark2
        - 6. Mark3
        - 7. Mark4
        - 8. Enter
      - 3. Correct
      - 4. Delete
      - 5. Insert
    - 7. Shift
    - 8. Shift Clear
  - 4. Geodetic

Main Menu
- 7. NAV Equipment Setting
  - 1. Set GYRO
  - 2. Heading Equipment
  - 3. Speed Equipment
  - 4. Manual Speed
  - 5. MAG Compass Setting
    - 1. Heading Correction
    - 2. Correct Value
  - 6. Set/Drift Setting
    - 1. Correction
    - 2. Set
    - 3. Drift
  - 7. GPS Setting
    - 1. GPS Process Setting
      - 1. Position
      - 2. Exclusion
      - 3. Geodetic
      - 4. Antenna Height
      - 5. Fix Mode
      - 6. DOP Level
      - 7. Position Average
      - 8. Master Reset
      - 9. Send Data
    - 2. DGPS Setting
      - 1. Mode
      - 2. Frequency
      - 3. Baud Rate(BPS)
      - 4. DGPS Mode
      - 5. Send Data
    - 3. SBAS Setting
      - 1. Mode
      - 2. Ranging
      - 3. NG SBAS
      - 4. SBAS Select Mode
      - 5. SBAS No.
      - 6. Send Data
    - 4. GPS Status
  - 8. Weather INFO Setting
    - 1. Display Weather INFO
    - 2. SEL Observation Place
    - 3. RX Message Display
    - 4. RX Buzzer

Main Menu
|- 8. Graphic Display
|- 0. EXIT

Main Menu
- 1. RADAR Menu
  - 1. IR
  - 2. Process
  - 3. Target Enhance
  - 4. Zoom
  - 5. SART
  - 6. Process Setting
    - 1. Video Latitude
    - 2. Video Noise Rejection
    - 3. AUTO Dynamic Range
    - 4. Process Switch
    - 5. 2nd Process Mode
    - 6. Process Switch Rrange
    - 7. Fast Target Detection

Main Menu
|- 1. RADAR Menu
|- 6. Process Setting
| |- 8. User Function Setting
| |- 1. Function1 Setting
| | |- 1. Mode
| | |- 2. IR
| | |- 3. Process
| | |- 4. Target Enhance
| | |- 5. AUTO STC/FTC
| | |- 7. Save Present State
| | |- 8.
| | |- 9. Next
| | |
| | |- 1. Pulse Length 0.5nm
| | |- 2. Pulse Length 0.75nm
| | |- 3. Pulse Length 1.5nm
| | |- 4. Pulse Length 3nm
| | |- 5. Pulse Length 6nm
| | |- 6. Pulse Length 12nm
| | |- 8. Pulse Length Pattern
| | | |- 1. 3NM
| | | |- 2. 6nm
| | | |- 3. 12NM
| | |
| | |- 9. Next
| | |
| | |- 1. Video Latitude
| | |- 2. Video Noise Rejection
| | |- 3. AUTO Dynamic Range
| | |- 4. PROCESS SWITCHING
| | |- 5. 2nd Process Mode
| | |- 6. Process Switch Range
| | |- 7. Fast Target Detection
| | |- 9. Next
| | |
| | |- 1. Trails Interval
| | |- 2. Trails Mode
| | |- 3. Trails Ref Level
| | |- 4. Trails Reduction
| | |- 5. Time/All Combine
| | |- 6. Trails Process
| | |- 7. MAX Interval
| | |- 9. Next
| | |
| | |- 1. Gain Offset
| | |- 2. PRF
| | |- 3. Small Buoy Detection
| | |- 4. Fishnet Detection
| | |- 5. Antenna Height
| | |- 8. Set Mode Default
| | |- 9. Initialize
| |
| |- 2. Function2 Setting
| |- 3. Function3 Setting

```
|                    |- 4. Function4 Setting
|
|- 7. RADAR Trails Setting
        |- 1. Trails Interval
        |- 2. Trails Mode
        |- 3. Trails REF Level
        |- 4. Trails Reduction
        |- 5. Time/All Combine
        |- 6. Trails Process
        |- 7. MAX Interval
        |- 8.
        |- 9. Next
        |
        |- 1. File Load
        |- 2. File Save
        |- 3. File Erase
        |- 4. Trails Erase
                |- 1. Trails Erase Mode
                |- 2. Trails Erase Start
                |- 3. Eraser Size
```

Main Menu
- 1. RADAR Menu
  - 8. RADAR Sub Menu
    - 1. PIN Setting
      - 1. Load PIN Setting
      - 2. Save PIN Setting
      - 3. Delete PIN Setting
    - 2. Multi Dial Setting
      - 1. Vector Length
      - 2. Trails Length
      - 3. TT TGT Display No.
      - 4. C-UP Angle
      - 5. Own Track Color
      - 6. Mark/Line Color
    - 3. User Key Setting
      - 1. User Key1
      - 2. User Key2
    - 4. Date/Time Setting
      - 1. UTC/LOCAL
      - 2. Local Date
      - 3. Local Time
      - 4. Time Zone
      - 5. Display Style
    - 5. Buzzer Volume

Main Menu (RADAR MENU key)
- 1. RADAR Menu
  - 8. RADAR Sub Menu
    - 6. Jog Dial Button Mode
      - 1. Left Jog Dial
      - 2. Right Jog Dial
    - 9. Test Menu
      - 1. Self Test
        - 1. Memory Test
          - 1. SDRAM
          - 2. SRAM
          - 3. FLASH ROM
          - 4. GRPHIC
        - 2. TXRX Test
          - 1. SAFETY SWITCH
          - 2. AZI PULSE
          - 3. HL PULSE
          - 4. MH CURRENT
          - 5. TRIGGER
          - 6. VIDEO
        - 3. Line Test
          - 1. TXRX
          - 2. NSK
          - 3. COMPASS
          - 4. COM1
          - 5. COM2
          - 6. COM3
          - 7. COM4
          - 8. Plotter Key
      - 2. Monitor Test
        - 1. Pattern 1
        - 2. Pattern 2
        - 3. Pattern 3
        - 4. Pattern 4
        - 5. Pattern 5
        - 6. Pattern 6
        - 7. Pattern 7
      - 3. Keyboard Test
        - 1. Key Test
        - 2. Buzzer Test
        - 3. Light
      - 4. MON Display
      - 5. Alarm List/Log
      - 6. System Info
  - 0. EXIT

Main Menu (RADAR MENU key)
|- 9. Plot Menu
|- 1. Own Track Setting
|- 1. OWN Track Interval
|- 2. DISP Own Track Color
| |- 1. All
| |- 2. White
| |- 3. Cyan
| |- 4. Blue
| |- 5. Green
| |- 6. Yellow
| |- 7. Pink
| |- 8. Red
|
|- 3. Clear Own Track Color
|- 4. OWN Track Memory
|- 5. Track Color
|- 6. Track Memory
|- 7. Num/Vector Display
|- 9. Next
|
|- 1. Water Depth Setting
| |- 1. Depth setting（MIN）
| |- 2. Depth setting
| |- 3. Depth setting
| |- 4. Depth setting
| |- 5. Depth setting
| |- 6. Depth setting（MAX）
|
|- 2. Water TEMP Setting
| |- 1. Temperature setting（MIN）
| |- 2. Temperature setting
| |- 3. Temperature setting
| |- 4. Temperature setting
| |- 5. Temperature setting
| |- 6. Temperature setting（MAX）
|
|- 3. Tideway Setting
|- 1. Tideway Size
|- 2. Layer A
|- 3. Layer B
|- 4. Layer C

Main Menu (RADAR MENU key)
|- 9. Plot Menu
|- 2. Mark Setting
|- 1. Display Mark Type
|- 1. All
|- 2. Fish 1
|- 3. Fish 2
|- 4. Fish heaven (round)
|- 5. Fish heaven (square)
|- 6. Wreck
|- 7. Squid
|- 8. Scallop
|- 9. Next
|
|- 1. Crab
|- 2. Lobster
|- 3. Mola
|- 4. ＋
|- 5. X
|- 6. Y
|- 7. Hour glass
|- 8. Star
|- 9. Next
|
|- 1. Buoy 1
|- 2. Buoy 2
|- 3. Buoy 3
|- 4. Number
|- 5. ⋯
|- 6. -
|- 7. ._
|- 8. ▪
|

Main Menu (RADAR MENU key)
- 9. Plot Menu
  - 2. Mark Setting
    - 2. Display Mark Color
      - 1. All
      - 2. White
      - 3. Cyan
      - 4. Blue
      - 5. Green
      - 6. Yellow
      - 7. Pink
      - 8. Red
    - 3. Clear Mark Color/Type
    - 4. Mark/Line Entry
    - 5. Mark/Line List
    - 6. New Mark/Line Input
      - 1. Type
      - 2. Color
      - 3. LAT/LON
      - 4. Comment
      - 9. New Mark Input
        - 9. New Line Input
  - 3. WPT/Route Setting
    - 1. Waypoint Alarm
    - 2. Route Alarm
    - 3. Set Route Sequence
    - 4. Select Route
    - 5. Waypoint Entry
    - 6. Waypoint Input
    - 7. Save TEMP Route
    - 8. Route Alarm Color
  - 4. WPT/Route Operation
    - 1. Route Sequence
    - 2. Waypoint Switch Mode
    - 3. Waypoint Skip
    - 4. Waypoint Back Skip
    - 5. Set/Cancel Waypoint

Main Menu (RADAR MENU key)
- 9. Plot Menu
  - 5. Map Setting
    - 1. Fill Land Area
    - 2. C-MAP Setting
      - 1. Grid Display
      - 2. Sounding Display
      - 3. Sounding Unit
      - 4. Light Sectors Display
      - 5. Light Sectors Level
      - 6. Chart Boundary
      - 7. Buoy&Beacon
      - 8. Names
      - 9. Next
      - 1. Land Marks
      - 2. River&Lake
      - 3. Cultual
      - 4. Bottom Type
      - 5. Under Water
      - 6.
      - 7. Depth Contour
    - 3. JRC/ERC Setting
      - 1. Day/Night
      - 2. Color of Land
      - 3. Bright of Land
      - 4. Color of Sea
      - 5. Bright of Sea
      - 6. Color of Name
      - 7. Bright of Name
      - 8. Bright of Track/Mark/Line
      - 9. Next
      - 1. LAT/LON Line
      - 2. Color of L/L Line
      - 3. Bright of L/L Line
      - 4. ERC Display Request
      - 5. ERC Mark
      - 6. JRC Card Display
        - 1. Lighthouse
        - 2. Buoy
        - 3. Rough Line
        - 4. Other Line
      - 7. Copy JRC Chart to CF
      - 8. Fishing Area Display

Main Menu (RADAR MENU key)
- 9. Plot Menu
  - 5. Map Setting
    - 4. Contour Setting
      - 1. 10m
      - 2. 20m
      - 3. 30m
      - 4. 40m
      - 5. 50m
      - 6. 60m
      - 7. 70m
      - 8. 80m
      - 9. Other
    - 5. Map Display Setting
      - 1. Shift Coast Line 1
      - 2. Shift Coast Line 2
      - 3. LAT/LON Correction
      - 4. Map Center Position
      - 5. LORAN C Correction
        - 1. Chain
        - 2. TD1
        - 3. TD2
        - 4. TD1 Correction
        - 5. TD2 Correction
      - 6. LORAN A Correction
        - 1. LOP1
        - 2. LOP2
        - 3. TD1 Correction
        - 4. TD2 Correction
      - 7. DECCA Correction
        - 1. Chain
        - 2. LOP1
        - 3. LOP2
        - 4. LOP1 Correction
        - 5. LOP2 Correction
    - 6. Select JRC Chart File
      - 1. Disp File Information
        - . . . .
        - *Disp File Information
    - 7. Map Draw AZI Mode
    - 8. JRC Chart Draw Mode

Main Menu (RADAR MENU key)
- 9. Plot Menu
  - 6. MEM CAPA/Copy
    - 1. Copy Internal -> Card2
    - 2. Copy Card2 -> Internal
    - 3. Copy Card1->Card2
    - 4. Clear File
    - 5. Card2 Own Track Display
    - 6. Card2 Mark Display
    - 7. Show Card1
    - 8. Show Card2
  - 7. CLR MEM/INIT Card
    - 1. Clear Mark/Line Data
    - 2. Clear WPT/Route Data
    - 3. Format Card2

Main Menu (RADAR MENU key)
- 9. Plot Menu
  - 8. Plot Setting
    - 1. Scalse/Couse Up Setup
      - 1. Scale
      - 2. Preset Scale
      - 3. Course Up Data
        - 1. Tolerance
        - 2. Averaging
        - 3. Round Speed
    - 2. Cursor/Number Display
      - 1. Shape of Current Position
      - 2. Current POS Blink Interval
      - 4. Unit of Distance
      - 5. Current Position Display
      - 6. Select Line
      - 7. Select Mark Size
      - 8. Select Cursor Mark
      - 9. Next
      - 1. Event Mark 1
      - 2. Event Mark 2
      - 3. Select WPT Mark Size
      - 4. Cursor Vector DISP
      - 5. Cursor Vector Length
      - 6. Waypoint Vector
      - 7. Status of Origin/DEST
      - 9. Next
      - 1. WPT Number Display
      - 2. RTE Number Display
      - 3. Scalebar Display
      - 4. Numeric Mark
      - 5. Comment Font Size
    - 3. Basic
      - 1. AUTO Backup
  - 0. EXIT

TT Menu
- 1. TT Setting
  - 2. TT Symbol Didplay
  - 3. Target Number Display
  - 4.
  - 5.
  - 6.
- 2. AIS Setting
  - 1. AIS Function
  - 2. AIS Symbol Display
  - 3. AIS Received Message
    - 1. Addressed Message
    - 2. Broadcast Message
  - 4. Display Lost Target Data
  - 5. Own Ship's AIS Data
  - 6. AIS Filter Setting
    - 1. Filter Type
    - 2. Make AIS Filter
    - 3. Filter Display
    - 4. ENT
    - 5. Filter Mode
  - 7. Target Number Display
  - 8. AIS Alarm Setting
    - 1. CPA/TCPA Alarm
    - 2. Lost Alarm
    - 3.
    - 4.
    - 5.
  - 9. Next
  - 2. AIS Data DISP Setting

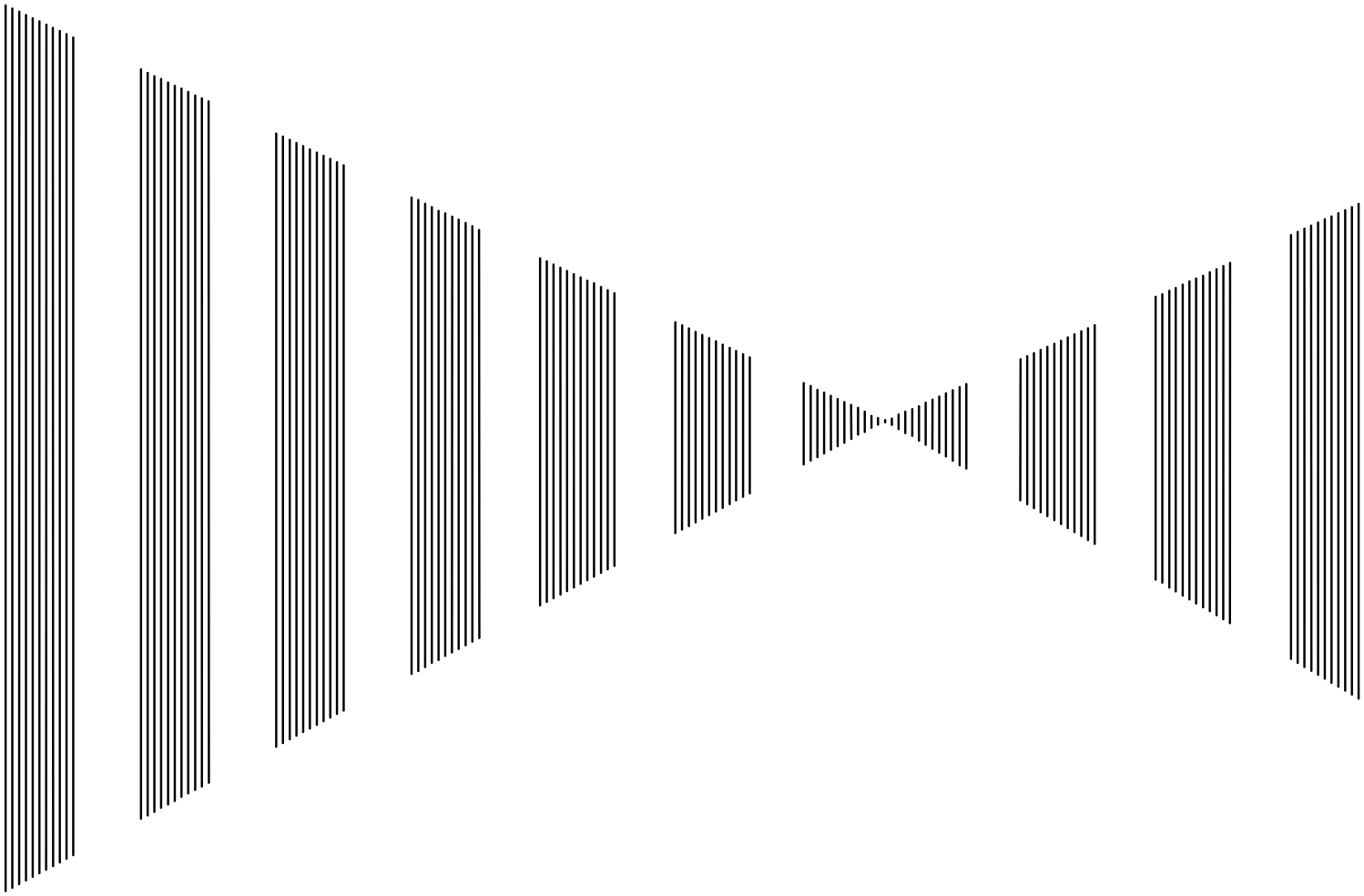
TT Menu
- 3. Target Setting
  - 1. Association Setting
    - 1. Association
    - 2. Priority
    - 3. Bearing
    - 4. Range
    - 5. Course
    - 6. Speed
    - 7. Hysteresis
    - 8. Non-hysteresis
    - 9. Applicable AIS Target
  - 2. Vector Time
  - 3. Past Position
  - 5. CPA Limit
  - 6. TCPA Limit
  - 7. CPA Ring
- 4. Target Track Setting
  - 1. Track Function
  - 2. Track Color
    - 1. All
    - 2. Target Track No.1
    - 3. Target Track No.2
    - 4. Target Track No.3
    - 5. Target Track No.4
    - 6. Target Track No.5
    - 7. Target Track No.6
    - 8. Target Track No.7
    - 9. Next
      - 1. Target Track No.8
      - 2. Target Track No.9
      - 3. Target Track No.10
      - 4. Target Track No.11
      - 5. Target Track No.12
      - 6. Target Track No.13
      - 7. Target Track No.14
      - 8. Target Track No.15
      - 9. Next
        - 1. Target Track No.16
        - 2. Target Track No.17
        - 3. Target Track No.18
        - 4. Target Track No.19
        - 5. Target Track No.20

TT Menu
- 4. Target Track Setting
  - 3. Track Display
    - 1. All
    - 2. Target Track No.1
    - 3. Target Track No.2
    - 4. Target Track No.3
    - 5. Target Track No.4
    - 6. Target Track No.5
    - 7. Target Track No.6
    - 8. Target Track No.7
    - 9. Next
    - 1. Target Track No.8
    - 2. Target Track No.9
    - 3. Target Track No.10
    - 4. Target Track No.11
    - 5. Target Track No.12
    - 6. Target Track No.13
    - 7. Target Track No.14
    - 8. Target Track No.15
    - 9. Next
    - 1. Target Track No.16
    - 2. Target Track No.17
    - 3. Target Track No.18
    - 4. Target Track No.19
    - 5. Target Track No.20
  - 4. Track Memory Interval
  - 5. Clear Track Color
  - 6. Clear Track Number
  - 7. Card2 Track Display

TT Menu
- 5. AZ Setting
  - 1. AZ
    - 1. AZ 1
    - 2. AZ 2
    - 3. Make AZ 1
    - 4. Make AZ 2
    - 5. ENT
  - 2. RADAR Alarm
    - 1. Sector RADAR Alarm
      - 1. Sector Alarm 1
      - 2. Sector Alarm 2
    - 3. Make Sector Alarm
      - 1. Sector Alarm 1
      - 2. Sector Alarm 2
      - 3. ENT
    - 5. RADAR Alarm Mode
    - 6. Sensitivity Level
  - 3. Set AZ Key
    - 1. AZ Alarm
      - 1. AZ Alarm 1
      - 2. AZ Alarm 2
    - 2. Sector RADAR Alarm
      - 1. Sector Alarm 1
      - 2. Sector Alarm 2
- 6. TT Test Menu
  - 1. Test Video
  - 2. TT Simulator
  - 3. Status
  - 4. Gate Display

TT Individual Setting
- |- 1. Name
- |- 2. Track Color
- |- 3. Association Priority
- |- 4. Reference Target

SECTION 3
PLOTTER OPERATION



JRC Japan Radio Co., Ltd.

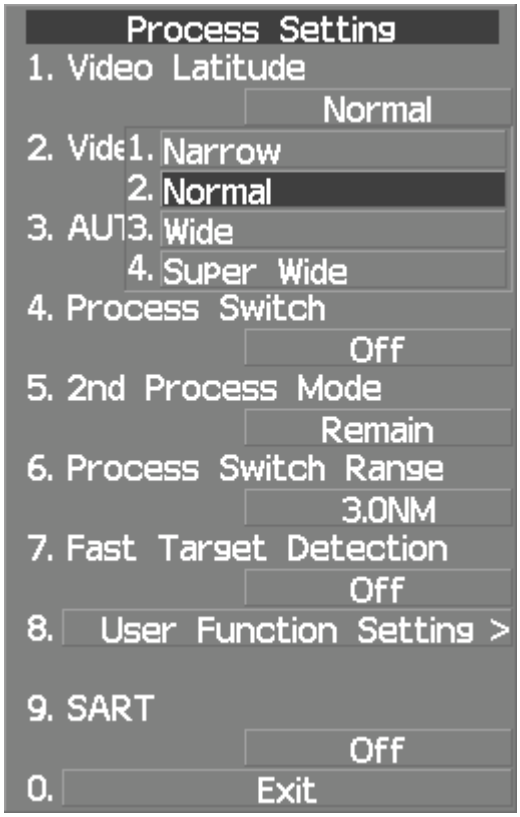
3

3.1 GENERAL OPERATION AND SETTINGS

3.1.1 General Cautions (to avoid operational problems)

⚠ CAUTION

- **Make sure to select an item after calling up the selection list. Failure to comply may result in abnormalities in other operations.**
- **When operation is completed, select the Exit button repeatedly until the menu is no longer displayed. Number keys are assigned to each menu item, so failure to comply may result in operational problems.**



Related Topics

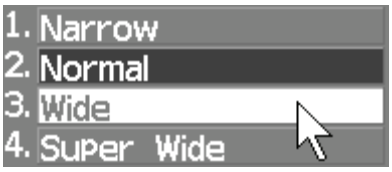
- 3.1.2 How to Select an Item from the Selection List (Page 3-2)
- 3.1.3 How to Cancel the Selection List (or not to select from the list) (Page 3-3)

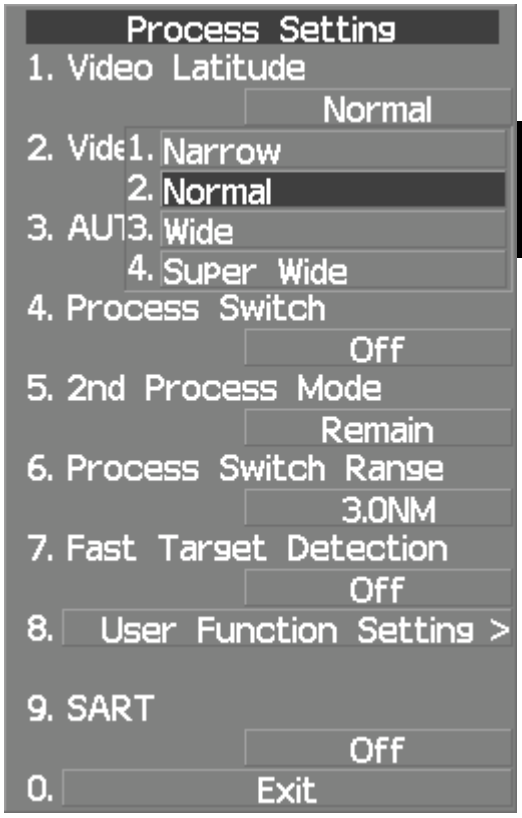
3.1.2 How to Select an Item from the Selection List

Procedure

- **Selection by the cursor**

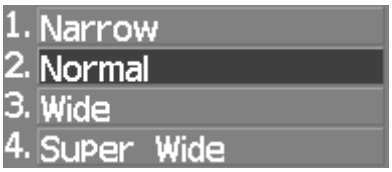
  1. **Put the cursor on the menu you wish to choose.**
  2. **Press the [ENT] key.**





- **Selection by the number key**

  1. **Check the number assigned to the menu item you wish to choose.**
  2. **Press the corresponding number key.**



Some buttons do not correspond to number keys.

Related Topics

- 3.1.1 General Cautions (to avoid operational problems) (Page 3-1)
- 3.1.3 How to Cancel the Selection List (or not to select from the list) (Page 3-3)

3.1.3 How to Cancel the Selection List (or not to select from the list)

Procedure

- **You called up the selection list, but you would like to cancel.**

1. Press the [CLR] key.

The list is canceled.

Pressing the [CLR] key may fail to cancel. Then, select an item.

Related Topics

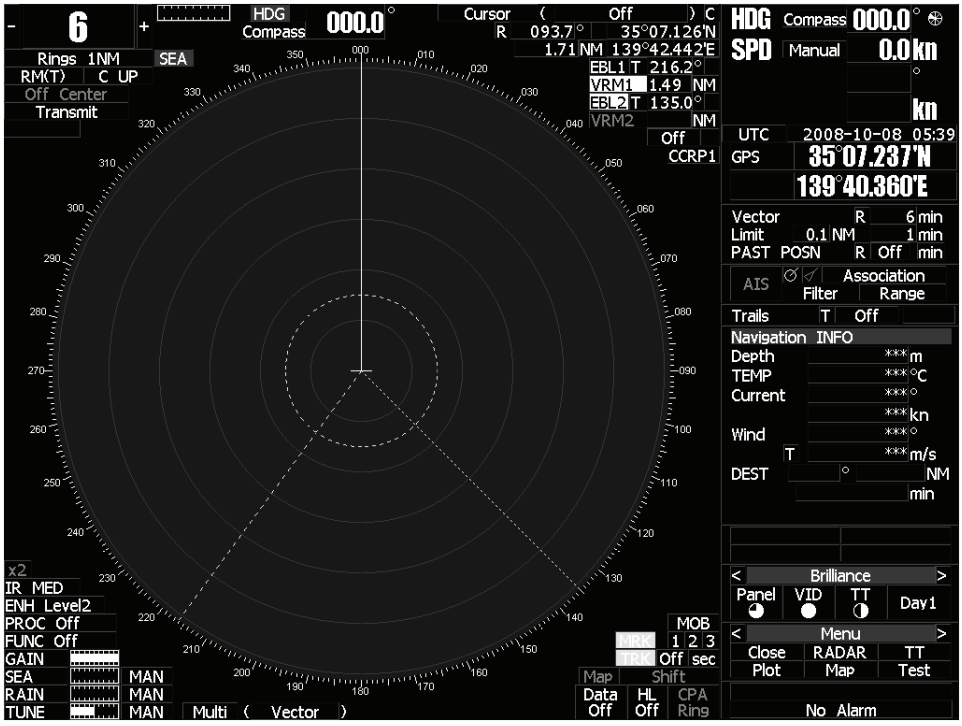
- 3.1.1 General Cautions (to avoid operational problems) (Page 3-1)
- 3.1.2 How to Select an Item from the Selection List (Page 3-2)

3.1.4 How to switch modes: radar, synthesis, and plotter modes

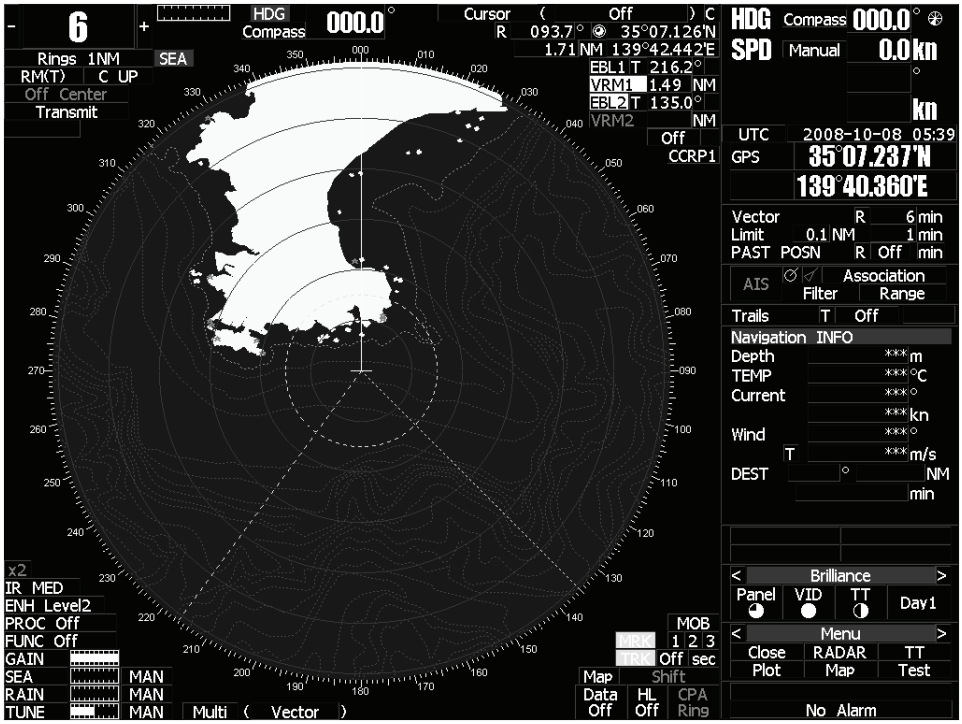
Procedure

1. Press the [Map] key (repeat this step to switch modes)

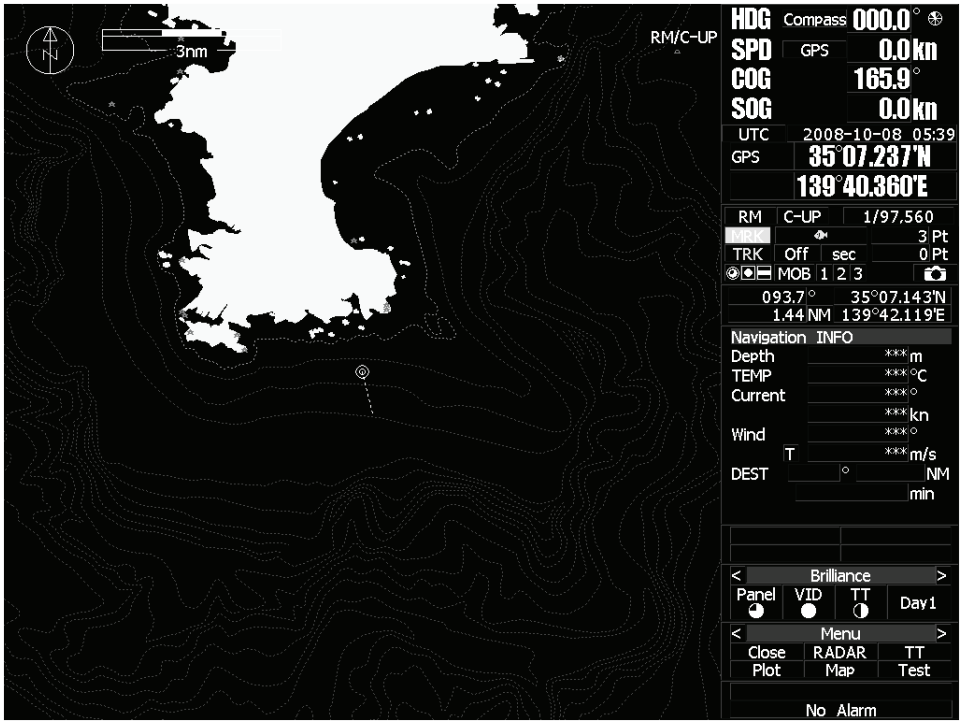
Radar mode: a PPI is displayed.



Synthesis mode: a PPI circle and a map are displayed. MAP at lower right of the PPI becomes lit.



Plotter mode: a PPI will not be displayed.



3.1.5 How to Change the Cursor Mode

3.1.5.1 How to Change the Cursor Mode (Radar mode)

Prerequisite

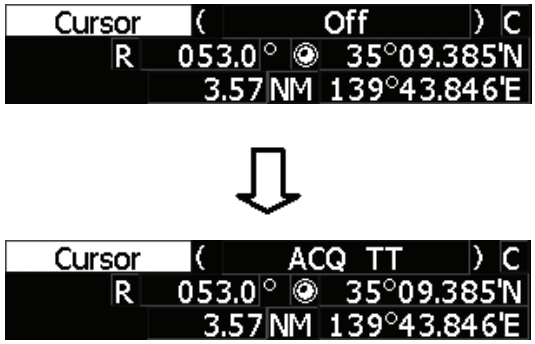
- **Radar mode.**

Procedure

1. **Select the Cursor button at the upper right of the display (repeat this step until the word shown on the right displays the desired mode).**

   Cursor mode changes in the following order.

   Off → **ACQ TT** → **ACT AIS** → **TGT Data** → **Cancel** → **Information** → **Off**



Related Topics

- 3.1.4 How to switch modes: radar, synthesis, and plotter modes (Page 3-4)
- 3.1.5.3 How to Change the Cursor Mode (Plotter mode) (Page 3-8)

3.1.5.2 How to Change the Cursor Mode (Synthesis mode)

Prerequisite

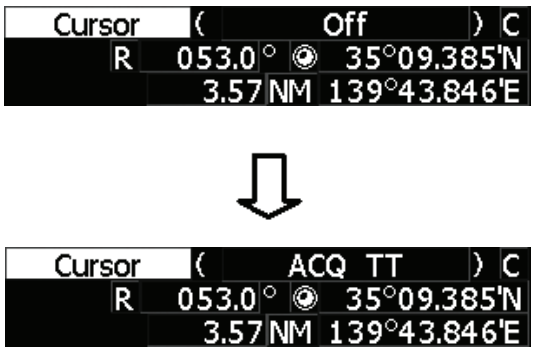
- **Synthesis mode.**

Procedure

1. **Select the Cursor button at the upper right of the display (repeat this step until the word shown on the right displays the desired mode).**

   Cursor mode changes in the following order.

   Off → **ACQ TT** → **ACT AIS** → **TGT Data** → **Cancel** → **Information** → **Mark** → **Line** → **Off**



Related Topics

- 3.1.4 How to switch modes: radar, synthesis, and plotter modes (Page 3-4)
- 3.1.5.3 How to Change the Cursor Mode (Plotter mode) (Page 3-8)

3.1.5.3 How to Change the Cursor Mode (Plotter mode)

Prerequisite

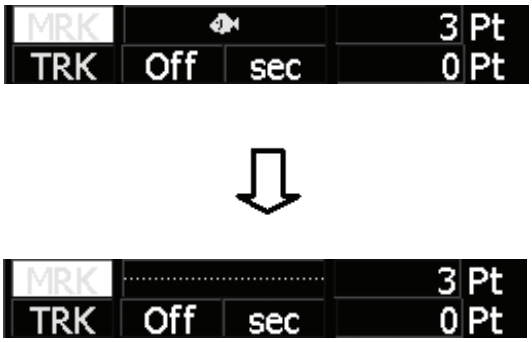
- **Plotter mode.**

Procedure

1. **Select the MRK button at the upper right of the display (repeat this step until the word shown on the right displays the desired mode).**

   Cursor mode changes in the following order.

   Mark → **Line** → **Information** → **Mark**



Related Topics

- 3.1.4 How to switch modes: radar, synthesis, and plotter modes (Page 3-4)
- 3.1.5 How to Change the Cursor Mode (Page 3-6)

3.1.6 How to Change Multi-dial Modes

Prerequisite

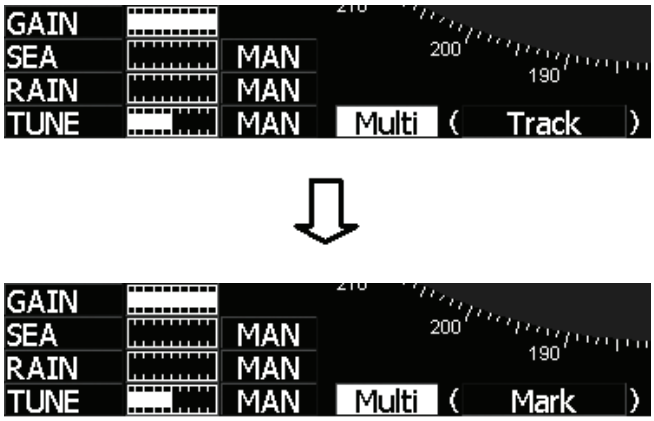
- **Synthesis mode.**

Procedure

1. Press the [MULTI] dial (repeat this step until the desired mode is displayed)

Multi-dial mode is displayed on the right hand side of MULTI at the bottom left corner of the screen.
Multi-dial mode changes in the following order.

Track (Own Track) → **Mark** → **TUNE** → **Vector** →
→ **Trails** (Radar trails) → **TGT ID** (Target number) → **Course** → **Track**



3.1.7 How to Assign Functions to the User Keys

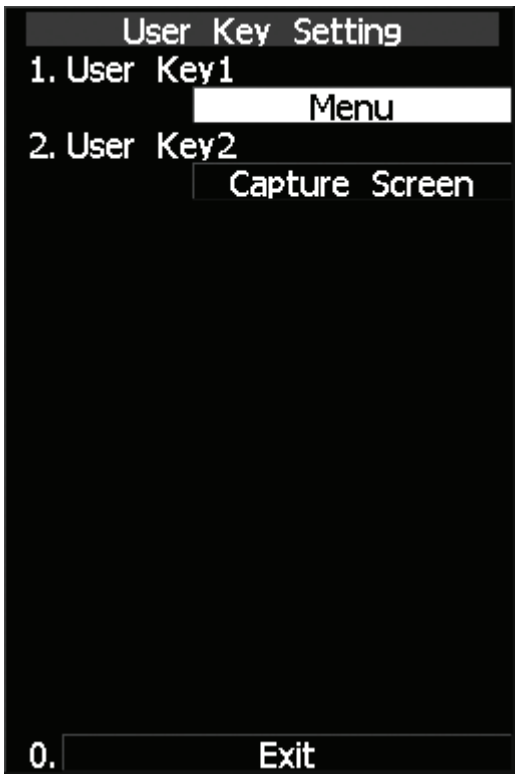
Procedure

1. Press the [RADAR MENU] key.

→ Press the [RADAR MENU] key.

→ Select the 8. RADAR Sub Menu .

→ Select the 3. User Key Setting .



2. Select User Key 1 or User Key 2 .

3. Select functions you wish to assign.

This system provides two user keys: [USER KEY1] and [USER KEY2]. Different functions can be allocated to each key.

Functions that can be allocated to each key are as follows:

Menu	: A specific menu is directly displayed.
Zoom	: The zoom display function is switched between on and off.
Scale	: Set the Scale key
DEST	: Set the Destination key
O->	: Start-point, Pass-point key in simple route operating
->O	: End-point key in simple route operating
<=>	: Switching key below ・input a mark at the own ship's position ・input a mark at the cursor position
Capture Screen	: Screen capture key (This function is enabled only when the memory card (optional) is connected.)

3.1.8 Keyboard Assignment Patterns

Procedure

- **Assignment pattern 1**

  1. Assign the [DEST] key to the [USER KEY 1].

  2. Assign the [O->] key to the [USER KEY 2].

- **Assignment pattern 2**

  1. Assign the [DEST] key to the [USER KEY 1].

  2. Assign the [->O] key to the [USER KEY 2].

- **Assignment pattern 3**

  1. Assign the [USER KEY 1] key to the [O->].

  2. Assign the [USER KEY 2] key to the [->O].

Related Topics

- 3.1.7 How to Assign Functions to the User Keys (Page 3-10)
- The following items can be handled by the Operation Unit:
  - > 3.6.1 How to Create a Destination Draft (Page 3-114)
  - > 3.6.2 How to Delete a Destination Draft (Page 3-115)
- With assignment pattern 1, the following items can be handled by the Operation Unit:
  - > 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.11 How to Delete a Route Draft (Page 3-131)
  - > 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
  - > 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
- With assignment pattern 2, the following items can be handled by the Operation Unit:
  - > 3.6.14 How to Cancel the Focused Route (Page 3-135)
  - > 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
  - > 3.1.19 How to Obtain Azimuth / Distance / Time Necessary to an Arbitrary Point from Own Ship's Position (Page 3-26)
- With assignment pattern 3, the following items can be handled by the Operation Unit:
  - > 3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)
  - > 3.1.20 How to Obtain Azimuth / Distance Between Two Arbitrary Points (Page 3-28)

3.1.9 How to Switch Between True Motions and Relative Motions

Prerequisite

- **Plotter mode.**

Procedure

1. Press the [TM/RM] key.

Motion settings are switched between true motions and relative motions.

True motions : The map will be fixed on the screen, and own ship's position moves.

Relative motions : Own ship's position is fixed on the screen, and the map moves.

3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode

Prerequisite

- **Motion has been set to relative motions.**

  > 3.1.9 How to Switch Between True Motions and Relative Motions (Page 3-13)

Procedure

1. Press the [AZI-MODE] key.

- **Plotter Mode**

  Relative Motions (RM) : **N-UP** → **D-UP** → **C-UP** → **N-UP**

  True motions (TM) : **N-UP**

  (Only the N-UP display method can be selected.)

- **Synthesis Mode**

  Relative Motions (RM) : **H-UP** → **N-UP** → **C-UP** → **H-UP**

  True motions (TM) : **N-UP** → **C-UP** → **N-UP**

  N-UP (North-up) : The top of the screen is matched with the north direction.

  D-UP (Destination-up): The top of the screen is matched with the destination direction.

  3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
  3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

  C-UP (Course-up) : The top of the screen is matched with the course direction.

  3.1.11 How to Make Settings for the Course-up Display Mode (Page 3-15)

  H-UP (Head-up) : The top of the screen is matched with ship's heading.

Note

- **Only the north-up display method is available in true motions.**

Related Topics

- 3.1.9 How to Switch Between True Motions and Relative Motions (Page 3-13)
- 3.1.4 How to switch modes: radar, synthesis, and plotter modes (Page 3-4)
- 3.1.11 How to Make Settings for the Course-up Display Mode (Page 3-15)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.1.11 How to Make Settings for the Course-up Display Mode

Prerequisite

- **Synthesis mode.**

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 1. Scale/Course Up Setup .

→ Select the 3. Course Up Data .

- **To set a threshold value to trigger screen rotation:**

  When the course turns with a degree which is larger than the specified degree, the screen rotates accordingly.

  1. Select the 1. Tolerance .

  2. Input a threshold value.

- **To define a range in which time-series data of the course becomes averaged:**

  An averaged course within the specified time range will be displayed.

  1. Select the 2. Averaging .

  Select from Short, Medium, and Long.
  As the time range becomes longer, the course data tends to show smaller changes. Therefore, the screen becomes less likely to rotate.

- **To set a lower limit of the speed to rotate the screen.**

  It is possible to prohibit the screen to rotate unless the ship travels faster than the specified speed.
  Due to errors made by the GPS receiver, the screen may conduct unnecessary rotation because the course becomes unstable when the ship travels slowly. This setting can prevent such unnecessary screen rotation.

  1. Select the 3. Round Speed .

  2. Input a lower limit of the speed.

Related Topics

- 3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)

3.1.12 How to Turn On / Off the Scale Bar Display

Prerequisite

- **Displaying JRC coastline ROM card or ERC card.**

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

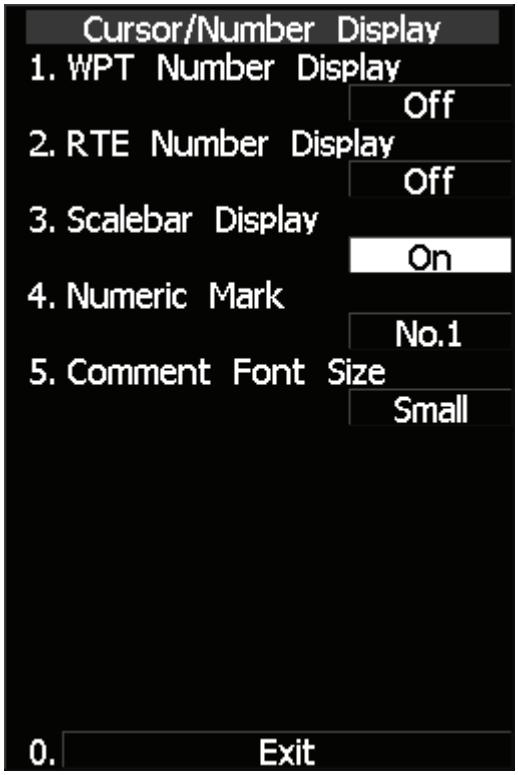
→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 9. Next .

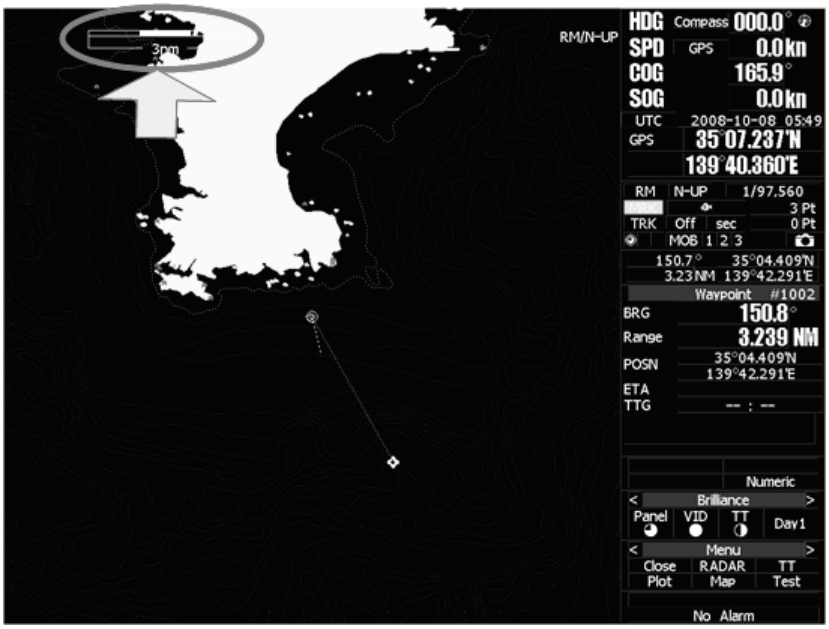
→ Select the 3. Scalebar Display .



2. Select the corresponding item.

On : Display the scale bar at the top left corner of the screen.

Off : Do not display the scale bar.



3

3.1.13 How to Change the Unit of Scale Ratio Used in the Display

Procedure

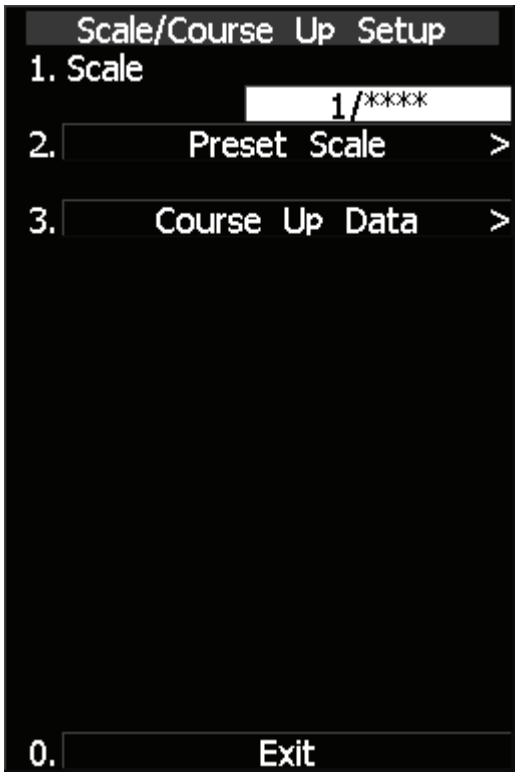
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 1. Scale/Course Up Setup .

→ Select the 1. Scale .



DISP Width : displays the actual distance of the width of the displayed chart.

1/* ** : the length of the scale bar displays 1/*** of the actual distance.

Related Topics

- 3.1.14 How to Scale the Screen (Page 3-21)
- 3.1.15 How to Change the Scale Ratio in Stages (Page 3-22)
- 3.1.13 How to Change the Unit of Scale Ratio Used in the Display (Page 3-19)
- 3.1.16 How to Preset the Scale Ratio (Page 3-23)

3.1.14 How to Scale the Screen

Procedure

1. Press the [RANGE +] or [RANGE -] key.

The scale ratio shown at the top right corner of the screen will change.

Related Topics

- 3.1.15 How to Change the Scale Ratio in Stages (Page 3-22)
- 3.1.13 How to Change the Unit of Scale Ratio Used in the Display (Page 3-19)

3.1.15 How to Change the Scale Ratio in Stages

Prerequisite

- **Set the scale ratio in advance.**
  > 3.1.7 How to Assign Functions to the User Keys (Page 3-10)
- **Assign the [SCALE] key to the [USER KEY 1] or [USER KEY 2].**
  > 3.1.16 How to Preset the Scale Ratio (Page 3-23)

Procedure

1. Press the [SCALE] key.

The scale ratio shown at the top right corner of the screen will change.

Related Topics

- 3.1.16 How to Preset the Scale Ratio (Page 3-23)
- 3.1.14 How to Scale the Screen (Page 3-21)
- 3.1.13 How to Change the Unit of Scale Ratio Used in the Display (Page 3-19)

3.1.16 How to Preset the Scale Ratio

Procedure

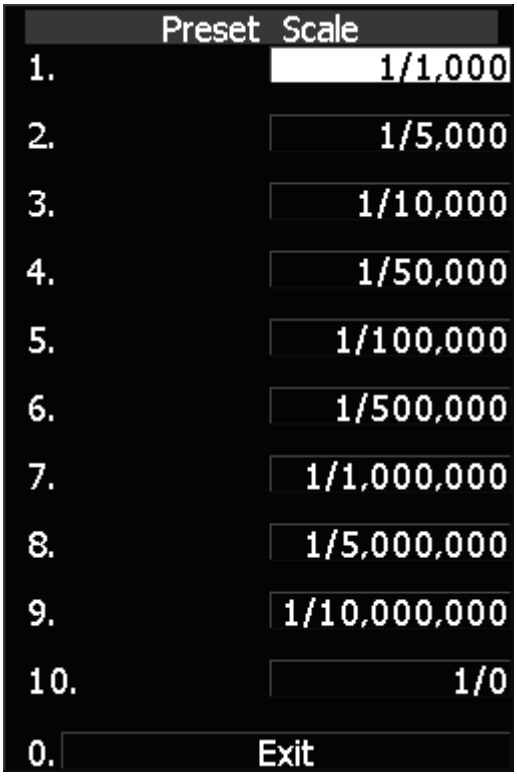
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 1. Scale/Course Up Setup .

→ Select the 2. Preset Scale .



This will set the scale ratio to be applied by the [SCALE] key.

Related Topics

- 3.1.15 How to Change the Scale Ratio in Stages (Page 3-22)
- 3.1.13 How to Change the Unit of Scale Ratio Used in the Display (Page 3-19)

3.1.17 How to Move the Screen to the Own Ship's Position / the Cursor Position

Procedure

- **To include the ship in the view:**

  1. Hold down the [OFF CENT] key.

- **To move the cursor to the center of the view:**

  1. Press the [OFF CENT] key.

  The position of the cursor on the screen will not change.

Related Topics

- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.1.18 How to Move Screen Images (Page 3-25)

3.1.18 How to Move Screen Images

Prerequisite

- **Plotter mode.**

Procedure

1. Continue moving the cursor to the direction where you wish to move.

Related Topics

- 3.1.17 How to Move the Screen to the Own Ship's Position / the Cursor Position (Page 3-24)

3.1.19 How to Obtain Azimuth / Distance / Time Necessary to an Arbitrary Point from Own Ship's Position

Prerequisite

- **Keyboard assignment pattern 2 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

⚠ CAUTION

- **This operation will clear the temporary route.**
  > 3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)
- **This operation will cancel the destination.**
  > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- **This operation will change the focused route.**
  > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

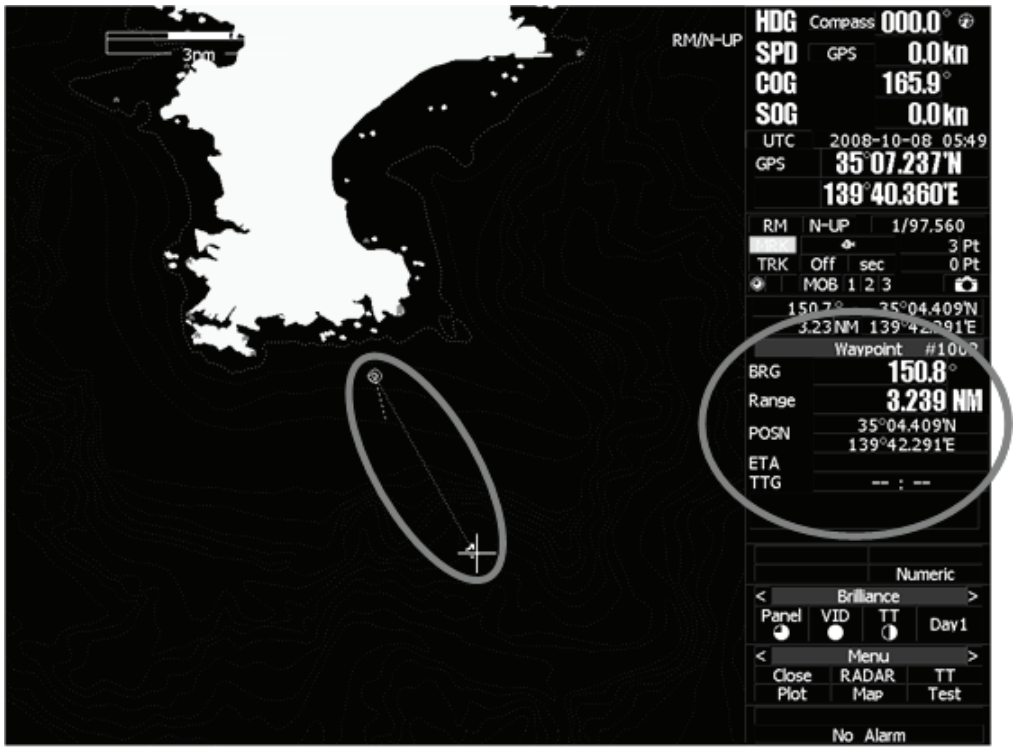
Procedure

- **To display the information:**

1. Move the cursor to an arbitrary position.

2. Press the [->O] key.

Azimuth / Distance / Time necessary will be displayed on the right hand side of the screen.



- **After checking the information (to exit):**

  1. Move the cursor over the point where it was placed first.

  2. Press the [->O] key.

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- 3.1.20 How to Obtain Azimuth / Distance Between Two Arbitrary Points (Page 3-28)
- 3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.1.20 How to Obtain Azimuth / Distance Between Two Arbitrary Points

Prerequisite

- **Keyboard assignment pattern 3 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- **Own ship's position information has been acquired.**
- **A temporary route has not been set as the focused route.**
  > 3.6.14 How to Cancel the Focused Route (Page 3-135)
- **A destination has not been set.**
  > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)

⚠ CAUTION

• This operation will change the setting of the focused route.
3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

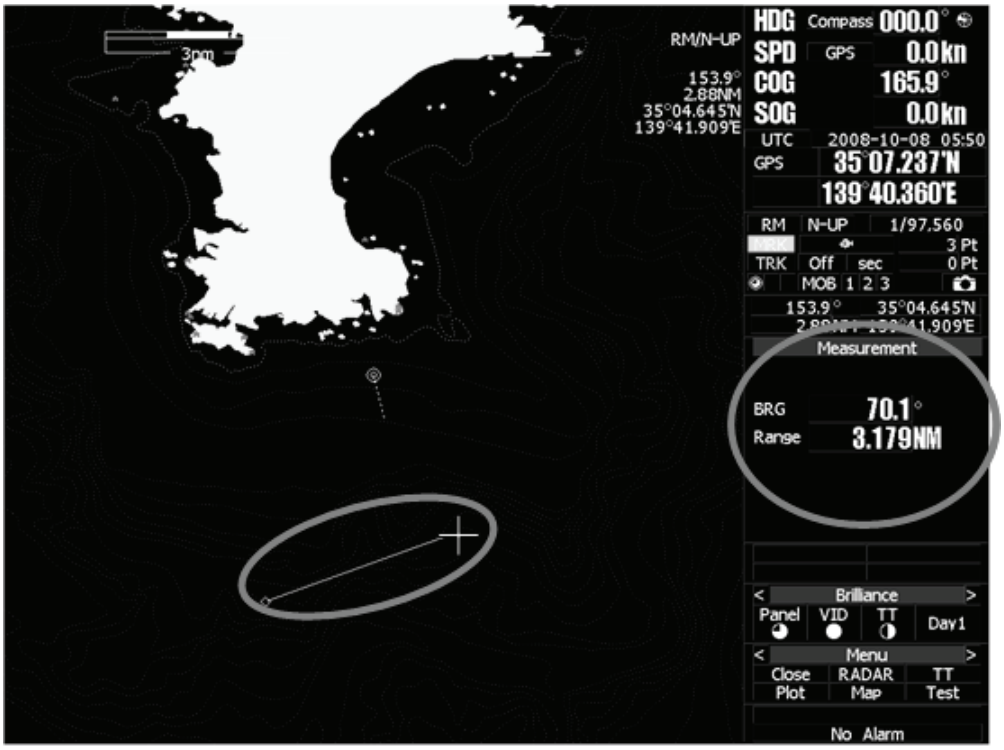
- **To display the information:**

1. Move the cursor to the starting point.

2. Press the [O->] key.

3. Move the cursor to the end point.

Azimuth / Distance will be displayed on the right hand side of the screen.



- **After checking the information (to exit):**

  1. Press the [->O] key.

  → **Press the [->O] key.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- 3.1.19 How to Obtain Azimuth / Distance / Time Necessary to an Arbitrary Point from Own Ship's Position (Page 3-26)
- 3.6.14 How to Cancel the Focused Route (Page 3-135)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.1.21 How to set the display for own ship's mark

Overview

- **Shape of own ship's mark can be changed.**
- **Blink frequency of own ship's mark can be changed.**

Prerequisite

- **Own ship's position has been acquired.**

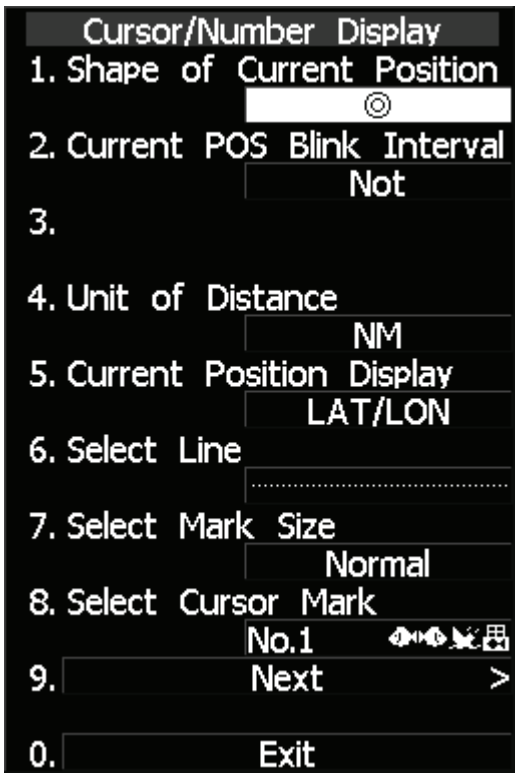
Procedure

1. Press the [Radar Menu] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .



- **To change the shape of own ship's mark:**

  1. Select Shape of Current Position .

  2. Select a desired shape.

  Off : Own ship will not be displayed.

  Other : Own ship will be displayed by the selected marks.

- **To change blink frequency of own ship's mark:**

  1. Select Current POS Blink Interval .

  2. Select desired blink interval.

Related Topics

- 3.1.17 How to Move the Screen to the Own Ship’s Position / the Cursor Position (Page 3-24)

3.1.22 How to change the unit used in the distance display

Procedure

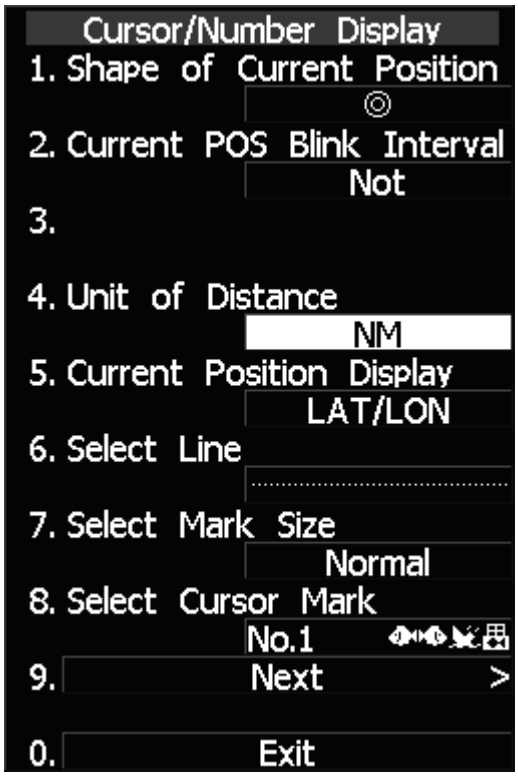
1. Press the [Radar Menu] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 4. Unit of Distance .



2. Select a desired item.

The unit used in distance display changes.

Related Topics

- 3.1.23 To change the unit displayed of the own ship's position and the cursor's position (Page 3-33)

3.1.23 To change the unit displayed of the own ship's position and the cursor's position

Procedure

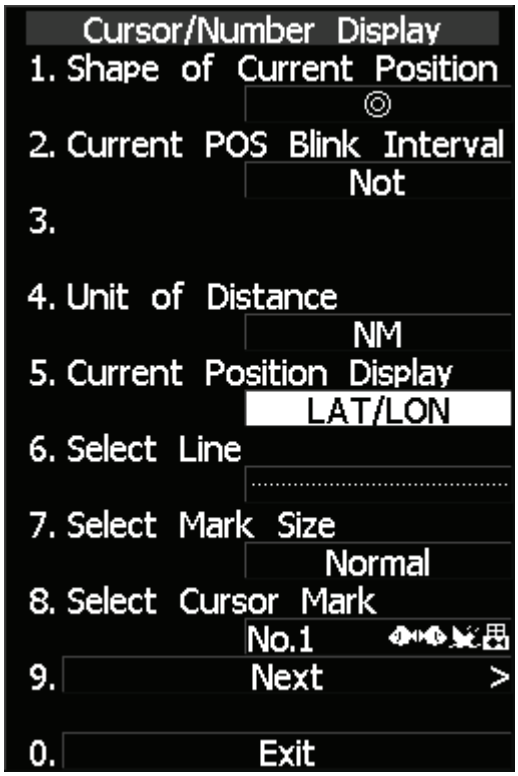
1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** .

→ **Select the** **8. Plot Setting**

→ **Select the** **2. Cursor/Number Display** .

→ **Select the** **5. Current Position Display** .



LAT/LON	: The position will be displayed with the latitude and longitude.
LORAN-A	: The position will be displayed with the LORAN A.
LORAN-C	: The position will be displayed with the LORAN C.
DECCA	: The position will be displayed with the DECCA.

3.1.24 How to Set Length of Heading Line

Overview

- **Display of heading line can be switched on or off.**
- **Length of heading line can be changed.**

Prerequisite

- **Own ship's speed and heading bearing has been acquired.**
- **Plotter mode.**

Procedure

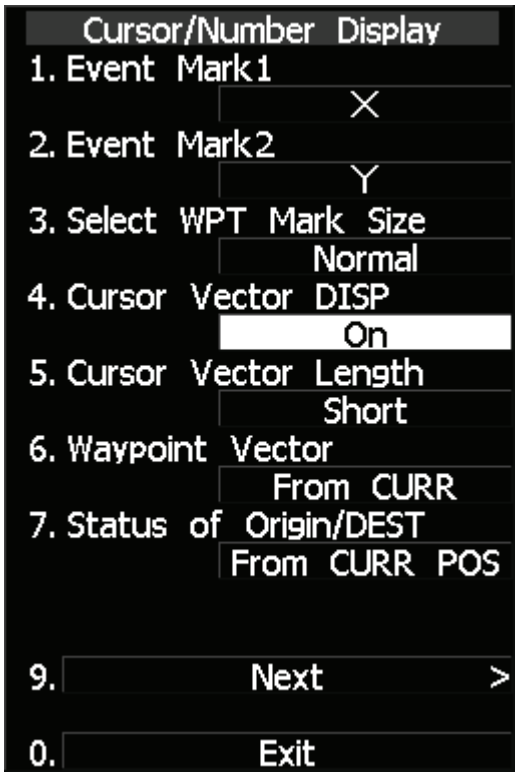
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .



- **To change the length of own ship's course vector:**

  1. Select the 4. Cursor Vector DISP .

  2. Select the corresponding item:

  On : Own ship's course vector will be displayed.

  Off : Own ship's course vector will not be displayed.

  The vector will not be displayed if own ship's course vector length display is turned "off" even though own ship's course vector display is turned "on".

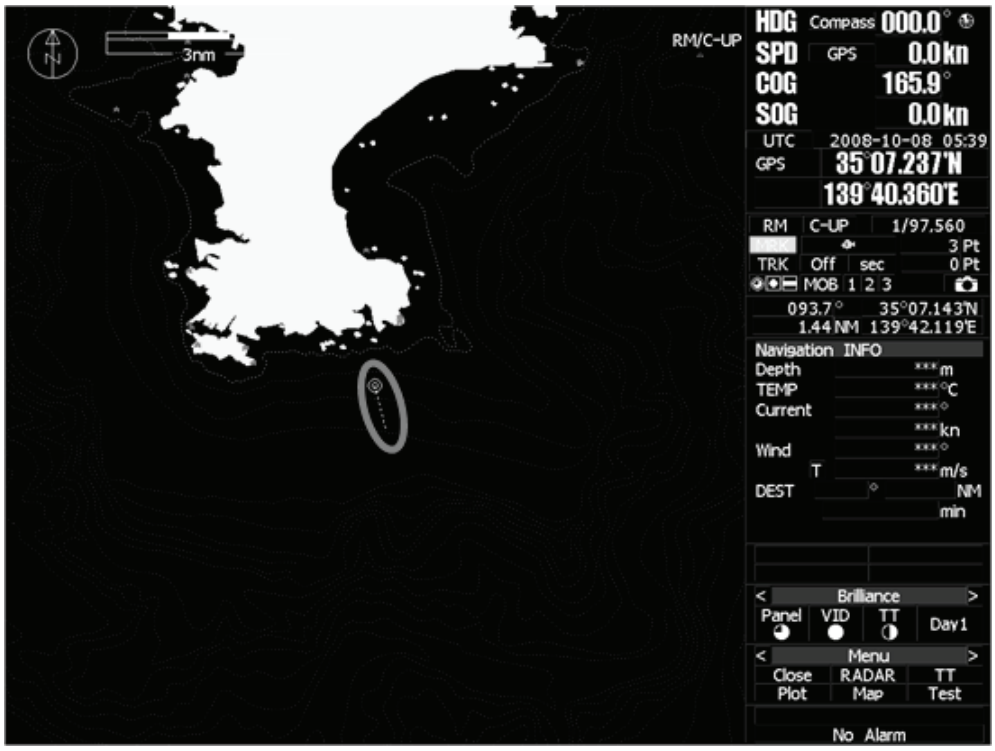
- **To change the Heading Line displays On / Off:**

  1. Select the 5. Cursor Vector Length .

  2. Select the corresponding item:

  Off : Heading line is not displayed.

  Other : Heading line with a selected length is displayed.



3.2 USE OWN SHIP'S TRACK FUNCTION

3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display

Prerequisite

- **Own ship's position information has been acquired.**
- **Check other display-related settings.**

  Own track will not be displayed on the screen depending on the settings made in the following sections:

  > 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)

  > 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)

  > 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **1. Own Track Setting** **.**

→ **Select the** **2. DISP Own Track Color** **.**

2. Select:

Off : Own track will not be displayed.

Other : Own track will be displayed in the selected color.

- **When** **1. All** **is on:**

  All settings will be given priority and the Other will be ignored.
  In other words, own tracks will be displayed regardless of the colors.

- **When** **1. All** **is off:**

  The Other will be given priority and All settings will be ignored.
  In other words, own tracks will be displayed according to the settings to each color.

Note

- **Changes will become effective for own tracks drawn after the changes are made.**
- **Colors can also be changed in the following wayin plotter mode:**

1. Press the [MULTI] dial.

Repeat this step until **TRK** at the upper right of the display is highlighted.

2. Turn the [MULTI] dial.

The color will then be changed.

- **Colors can also be changed in the following way in synthesis mode:**

1. Put the cursor on own ship's track color switching (lower right of the display), and press the [ENT] key.

Related Topics

- 3.2.2 How to Set Own Track Save Method (Page 3-39)
- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)
- 3.1.17 How to Move the Screen to the Own Ship's Position / the Cursor Position (Page 3-24)

3.2.2 How to Set Own Track Save Method

Overview

- **Own ship's track interval can be set.**
- **Own ship's track save can be turned on or off.**

Procedure

- **To turn on / off own track storage:**

  1. Put the cursor on own ship's track interval unit (lower right of the display), and press the [ENT] key.

  2. Select the corresponding unit:

- **To set the interval of own track save:**

  1. Put the cursor on own ship's track interval (lower right of the display), and press the [ENT] key.

  2. Select the desired interval.

  Off : Track storage will not be conducted.

  Numeric value : Track storage will be conducted.

Note

- **There is a limit to marks.**

  The upper limit of marks is 7000. If a mark exceeds the memory limit, older storage will be overwritten.

Related Topics

- 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)

3.2.3 How to Display Water Depth, Water Temperature, and Current Vector on Own Track

Prerequisite

- **To display current vector, first check the settings:**
  > 3.2.4 How to Make the Current Vector Display Settings (Page 3-42)

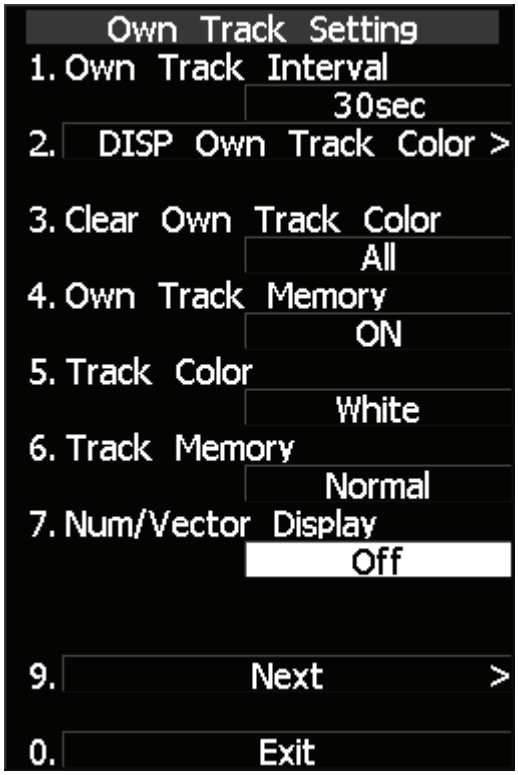
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **1. Own Track Setting** **.**

→ **Select the** **7. Num/Vector Display** **.**



2. Select an item to display.

Note

- **Multiple items cannot be displayed simultaneously.**

Related Topics

- 3.2.4 How to Make the Current Vector Display Settings (Page 3-42)
- 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

3.2.4 How to Make the Current Vector Display Settings

Overview

- **Length of current vector can be changed.**
- **Color of current vector can be changed.**
- **Current vector display can be turned on or off.**

Procedure

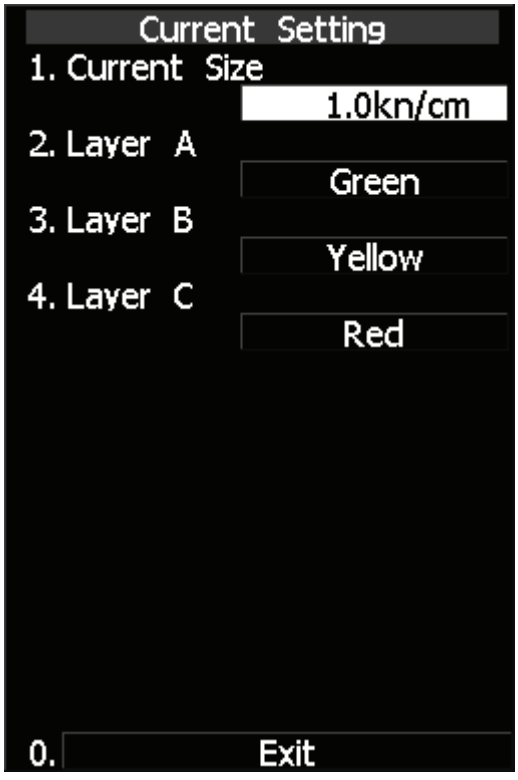
1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu **.**

→ **Select the** 1. Own Track Setting **.**

→ **Select the** 9. Next **.**

→ **Select the** 3. Current Setting **.**



- **To change current vector length:**

  1. Select the 1. Current Size **.**

  2. Input a value.

  Current vector will not be displayed if “0” is inputted.

- **To change current vector color:**

  1. Select a layer to change the color.

  2. Select a color.

  Off : Current vector will not be displayed.

  Other : Current vector will be displayed in the selected color.

Related Topics

- 3.2.3 How to Display Water Depth, Water Temperature, and Current Vector on Own Track (Page 3-41)

3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature

Prerequisite

- **Own ship's position has been acquired.**
- **Check other display-related settings.**

  Own track will not be displayed on the screen depending on the settings made in the following sections:

  > 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)

  > 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)

  > 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)

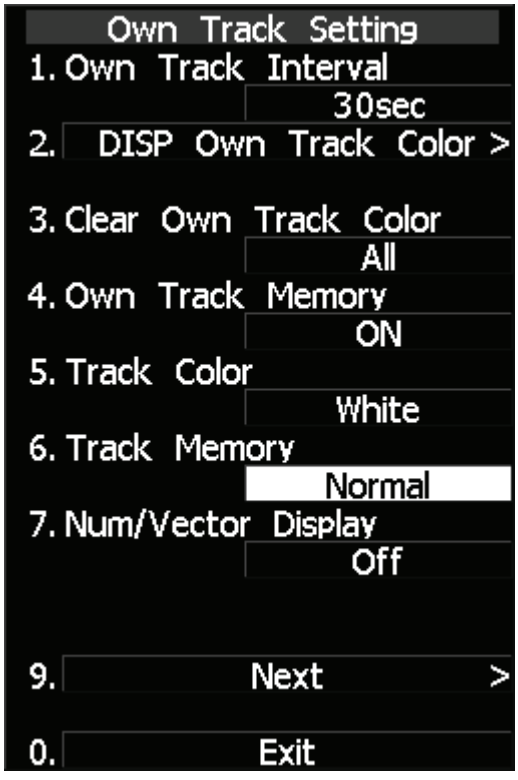
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **1. Own Track Setting** **.**

→ **Select the** **6. Track Memory** **.**



2. Select a desired item.

Normal	: Own track will be displayed in the regular own track color.
Depth	: Own track will be displayed in a color that corresponds to the water depth.
TEMP	: Own track will be displayed in a color that correspondinds to the water temperature.

Related Topics

- 3.2.6 How to Assign Water Depths to Colors to be Displayed as Own Track (Page 3-46)
- 3.2.7 How to Assign Water Temperatures to Colors to be Displayed as Own Track (Page 3-47)
- 3.2.3 How to Display Water Depth, Water Temperature, and Current Vector on Own Track (Page 3-41)
- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)

3.2.6 How to Assign Water Depths to Colors to be Displayed as Own Track

Prerequisite

- **Water depths have been assigned to the colors of own track.**
  > 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu **.**

→ **Select the** 1. Own Track Setting **.**

→ **Select the** 9. Next **.**

→ **Select the** 1. Water Depth Setting **.**

2. Assign water depth to each color.

Related Topics

- 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

3.2.7 How to Assign Water Temperatures to Colors to be Displayed as Own Track

Prerequisite

- **Water temperature have been assigned to the colors of own track.**
  > 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu **.**

→ **Select the** 1. Own Track Setting **.**

→ **Select the** 9. Next **.**

→ **Select the** 2. Water TEMP Setting **.**

2. Assign water temperature to each color.

Related Topics

- 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)

3.2.8 How to turn on / off the display of own tracks by color

Prerequisite

- **Own ship's position information has been acquired.**
- **Check other display-related settings.**

  Own track will not be displayed on the screen depending on the settings made in the following sections:

  How to change the color of own track or how to turn off the track display (See 3.26)

  How to turn on / off the display of marks, lines, and own tracks (See 3.45)

  How to display own tracks by using different colors for correspoinding water depth and water temperature (See 3.30)

Procedure

1. Press the [Radar Menu] key.

→ **Select the** 9. Plot Menu **.**

→ **Select the** 1. Own Track Setting **.**

→ **Select the** 2. DISP Own Track Color **.**

2. Select:

- **When ALL is on:**
  ALL settings will be given priority and the OTHERS will be ignored. In other words, own tracks will be displayed regardless of the colors.

- **When ALL is off:**
  The OTHERS will be given priority and ALL settings will be ignored. In other words, own tracks will be displayed according to the settings to each color.

Related Topics

- 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)
- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.2.5 How to Display Own Tracks by Using Different Colors for Correspoinding Water Depth and Water Temperature (Page 3-44)
- 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)

3.2.9 How to Delete Own Track Memory by Color

⚠ CAUTION

- **Deleted track memory cannot be restored.**
- **When water depths and water temperatures are assigned to own track colors, those memory will be deleted.**

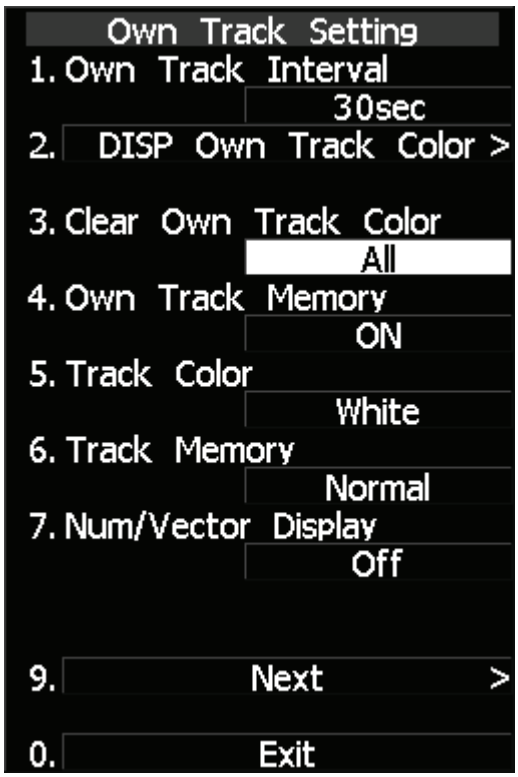
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **1. Own Track Setting** **.**

→ **Select the** **3. Clear Own Track Color** **.**



2. Select:

All : All own track memory will be deleted regardless of the color.

Other : Own track memories of the selected color will be deleted.

3. Select:

Yes : Delete.

No : Do not delete.

Related Topics

- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)
- 3.3.14 How to Delete Mark / Line Memory (Page 3-74)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)
- 3.6.11 How to Delete a Route Draft (Page 3-131)

3.3 USE USER MAP

3.3.1 How to Input a Numeric Mark

Prerequisite

- **The multi-dial operation panel must be in use.**
  This function cannot be used with the standard operation panel.

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

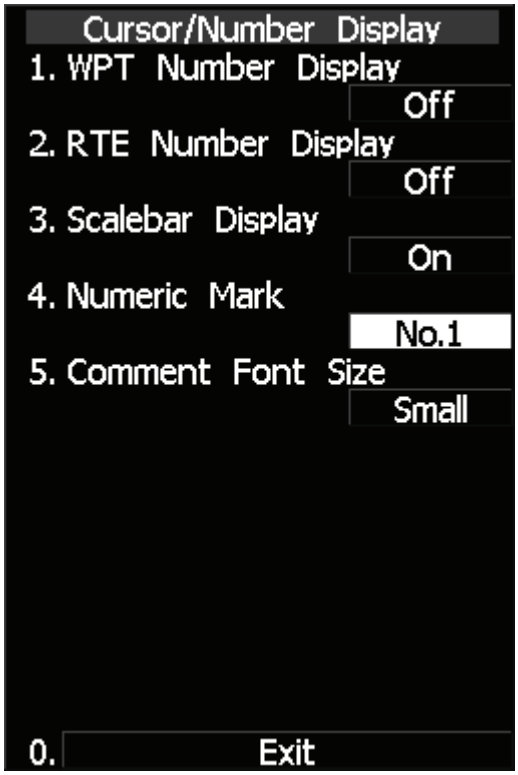
→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 9. Next .

→ Select the 4. Numeric Mark .



2. Select:

No.1 : Use of the [8] key inputs numeric marks in order.

No.2 : To input a desired numeric mark, press the [8] key, and then the corresponding numeric key.

Related Topics

- 3.3.3 How to Input a Mark (Page 3-56)

3.3.2 How to Change Mark Assignment to Numeric Key

⚠ CAUTION
• The types of marks vary depending on the equipment.

Prerequisite

- **The multi-dial operation panel must be in use.**
  This function cannot be used with the standard operation panel.

Procedure

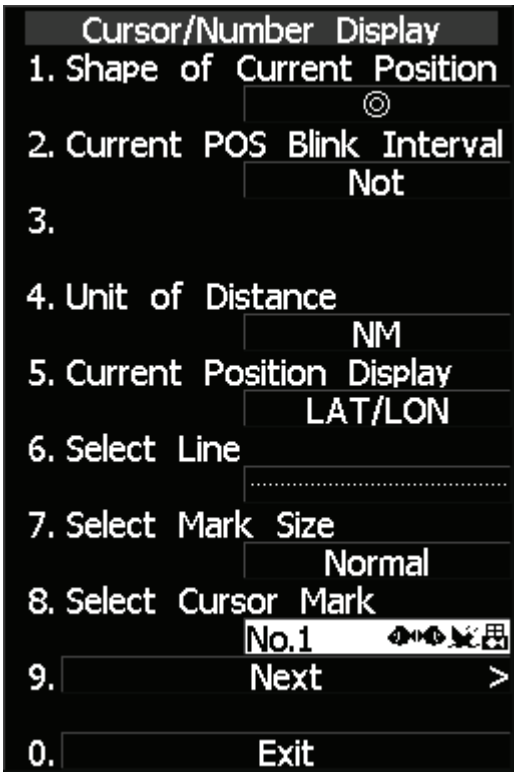
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

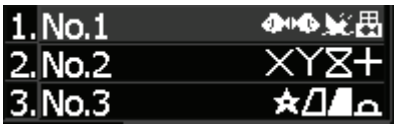
→ Select the 2. Cursor/Number Display .

→ Select the 8. Select Cursor Mark .



2. Select the corresponding item:

Assignment from the [4] key to [7] key is as shown below.



Related Topics

- 3.3.3 How to Input a Mark (Page 3-56)

3.3.3 How to Input a Mark

Prerequisite

- **Own ship's position information has been acquired.**
- **Check display-related settings.**

  If the display is turned off for the following settings, marks can be inputted but cannot be displayed.

  > 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
  > 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)

Procedure

1. Change cursor mode to "Mark".

3.1.5.3 How to Change the Cursor Mode (Plotter mode) (Page 3-8)

3.1.5 How to Change the Cursor Mode (Page 3-6)

2. Move the cursor over "Mark".

3. Press the [ENT] key (repeat this step until the desired mark appear).

Plotter mode

radar mode, synthesis mode

4. Move the cursor over the point you wish to use the mark.

5. Press the [ENT] key.

Note

- **There is a limit to marks.**

  The upper limit of total marks of line / event mark / mark is 20000. If a mark exceeds the memory limit, older storage will be overwritten.

Related Topics

- 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.1.5 How to Change the Cursor Mode (Page 3-6)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.8 How to Change the Color of Marks / Lines (plotter mode) (Page 3-65)
- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.19 How to Use a Shortcut: Mark Setting (synthesis mode) (Page 3-81)

3.3.4 How to Input a Line

Prerequisite

- **Own ship's position information has been acquired.**
- **Check display-related settings.**

  If the display is turned off for the following settings, lines can be inputted but cannot be displayed.

  > 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)

  > 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)

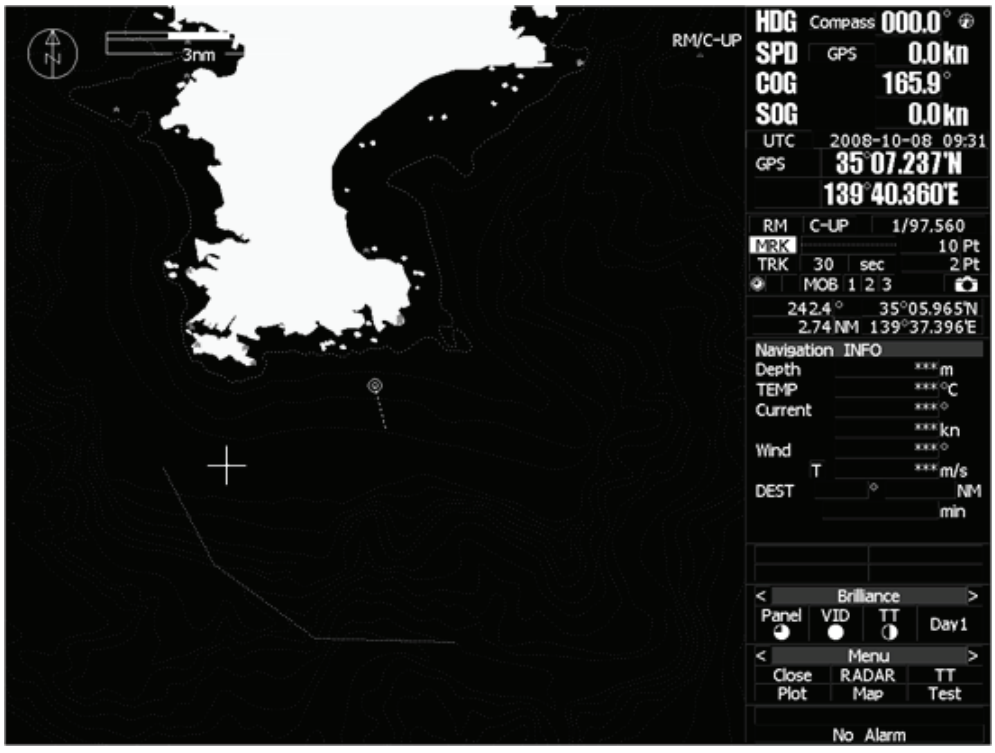
Procedure

1. Change cursor mode to "Line".

3.1.5.3 How to Change the Cursor Mode (Plotter mode) (Page 3-8)
3.1.5 How to Change the Cursor Mode (Page 3-6)

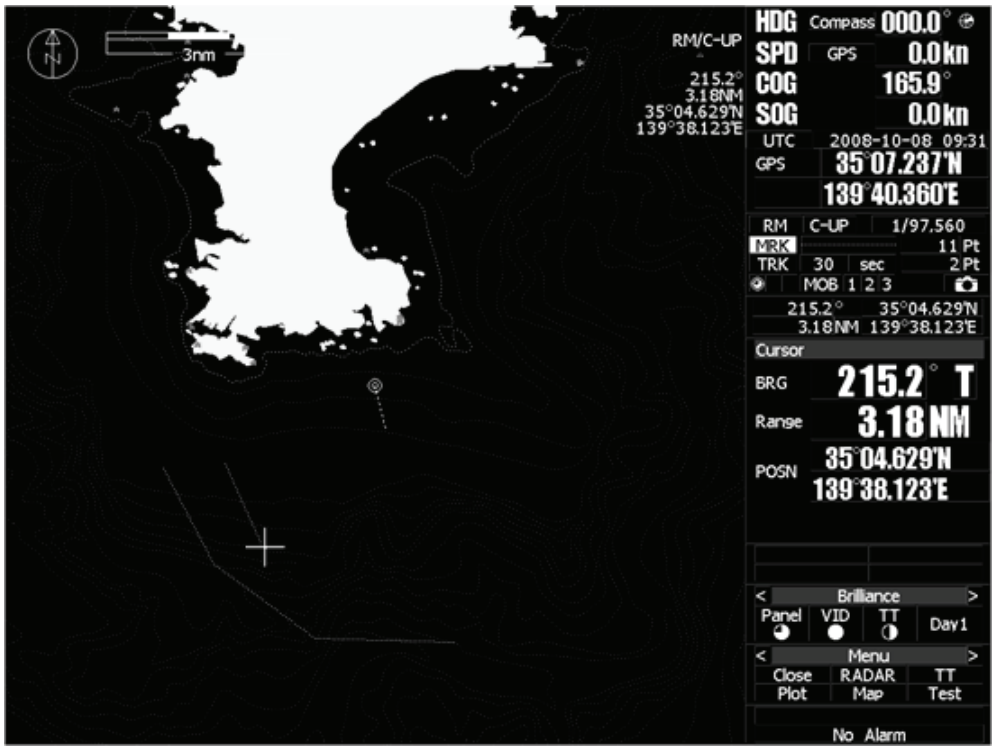
2. Move the cursor to the starting point.

→ **Press the [ENT] key.**



3. Move the cursor to the relay point.

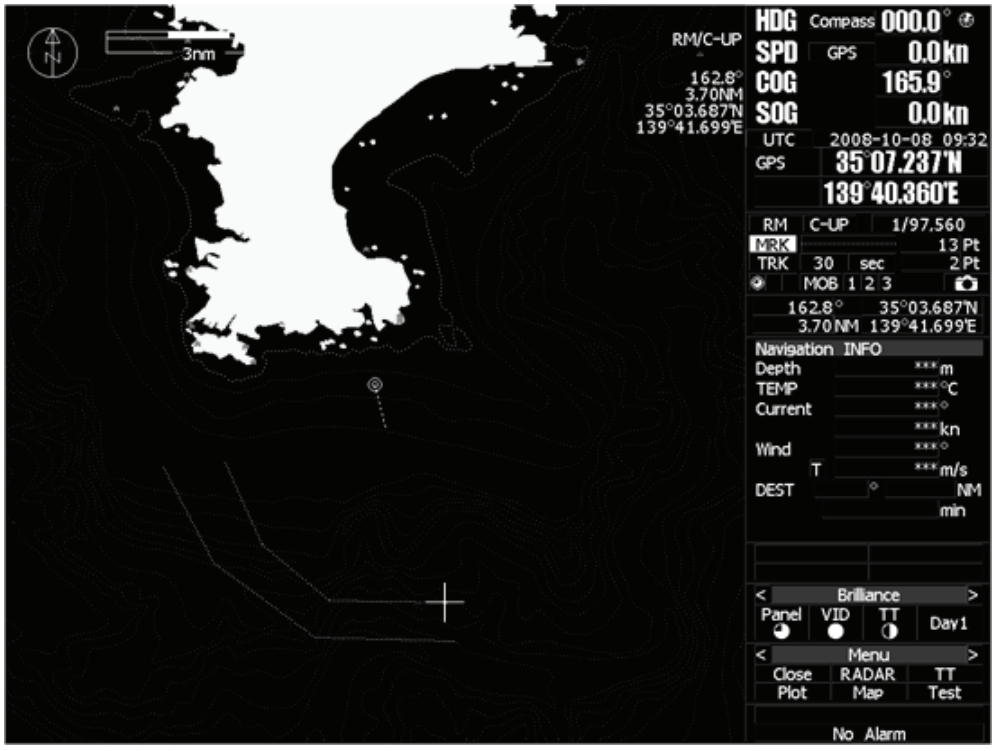
→ Press the [ENT] key (repeat this step for as many as the number of relay points).



4. Move the cursor to the end point.

→ Press the [ENT] key.

→ Press the [ENT] key.



Note

- **There is a limit to marks.**

  The upper limit of total marks of line / event mark / mark is 20000. If a mark exceeds the memory limit, older storage will be overwritten.

Related Topics

- 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.1.5 How to Change the Cursor Mode (Page 3-6)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.9 How to Change the Color of Mark / Line (synthesis mode) (Method 1) (Page 3-66)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.19 How to Use a Shortcut: Mark Setting (synthesis mode) (Page 3-81)

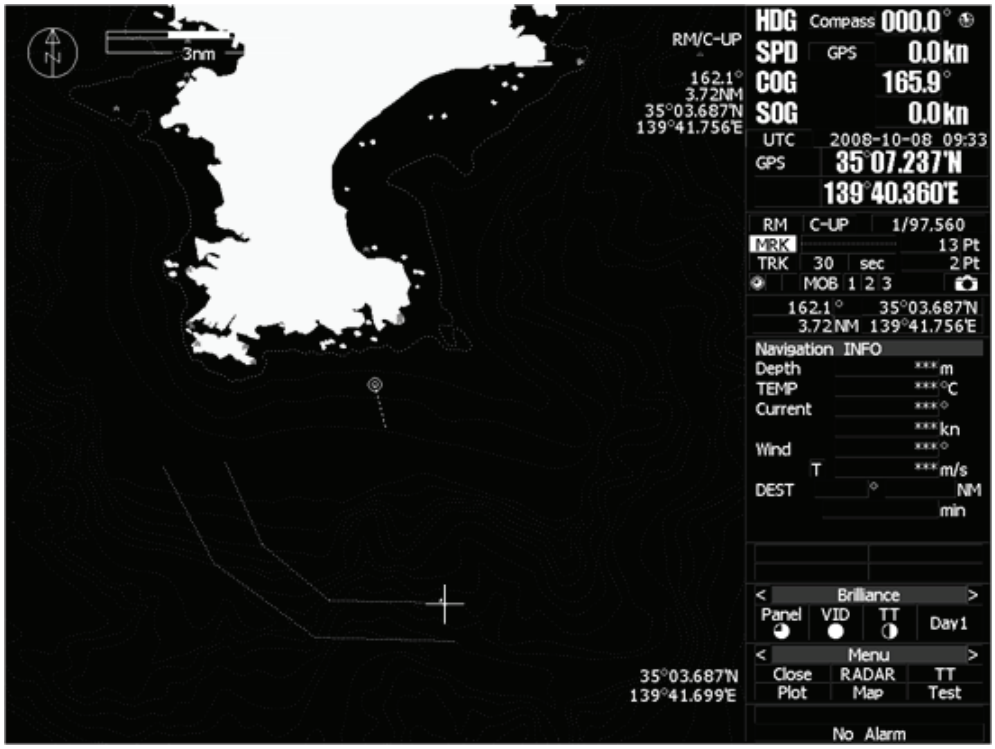
3.3.5 Deleting a mark or line

⚠ CAUTION

? With regard to the created user map, a mark or line is deleted individually.

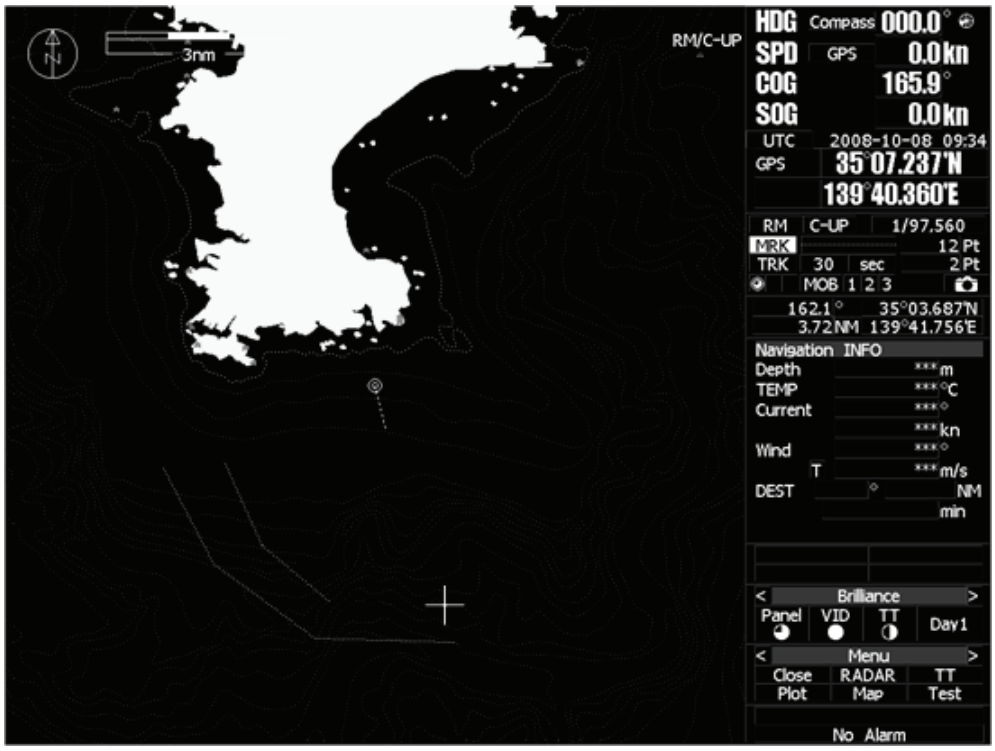
Procedure

1. Put the cursor on a mark or line.



2. Press the [DELETE] key.

he selected mark or line is deleted.
To delete another mark or line, repeat procedure 2.



3. When finished with the correction of lines and marks, press the [0] key.

Related Topics

- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.4 How to Input a Line (Page 3-58)

3.3.6 How to Change the Type of Marks / Lines

Procedure

1. Change cursor mode to “mark” / “line.”

3.1.5 How to Change the Cursor Mode (Page 3-6)

3.1.5 How to Change the Cursor Mode (Page 3-6)

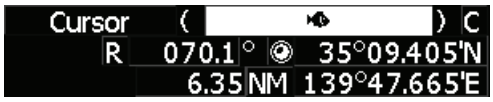
2. Put the cursor over “mark” / “line.”

Plotter mode

radar mode, synthesis mode

3. Press the [ENT] key (repeat this step until the desired mark / line appears).

Plotter mode



radar mode, synthesis mode

Related Topics

- 3.1.5 How to Change the Cursor Mode (Page 3-6)
- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.8 How to Change the Color of Marks / Lines (plotter mode) (Page 3-65)

3.3.7 How to Change the Type of Lines (Menu)

Procedure

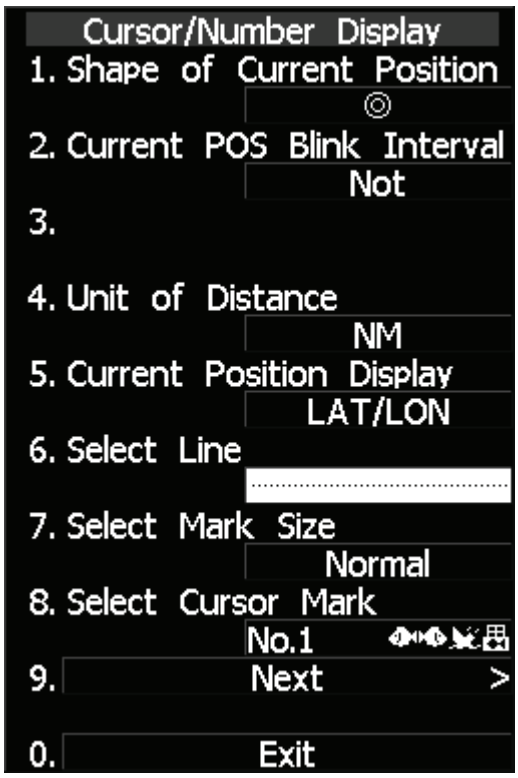
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 6. Select Line .



2. Select a desired type.

Related Topics

- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.8 How to Change the Color of Marks / Lines (plotter mode) (Page 3-65)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)

3.3.8 How to Change the Color of Marks / Lines (plotter mode)

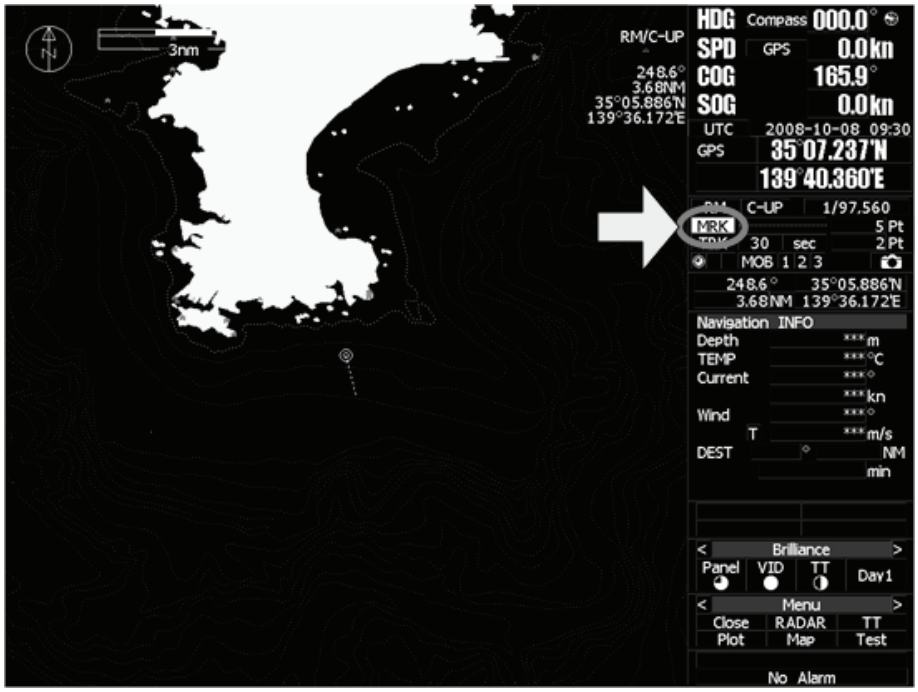
Prerequisite

- **Plotter mode.**

Procedure

1. Press the [MULTI] dial until the word Mark at the upper right of the display is highlighted.

Highlight “Mark” while changing the line color.
Color of marks / lines cannot be set separately.



2. Turn the [MULTI] dial.

Color of the mark / line changes.

Related Topics

- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.9 How to Change the Color of Mark / Line (synthesis mode) (Method 1) (Page 3-66)
- 3.3.10 How to Change the Color of Mark / Line (synthesis mode) (Method 2) (Page 3-67)

3.3.9 How to Change the Color of Mark / Line (synthesis mode) (Method 1)

Prerequisite

- **Synthesis mode.**

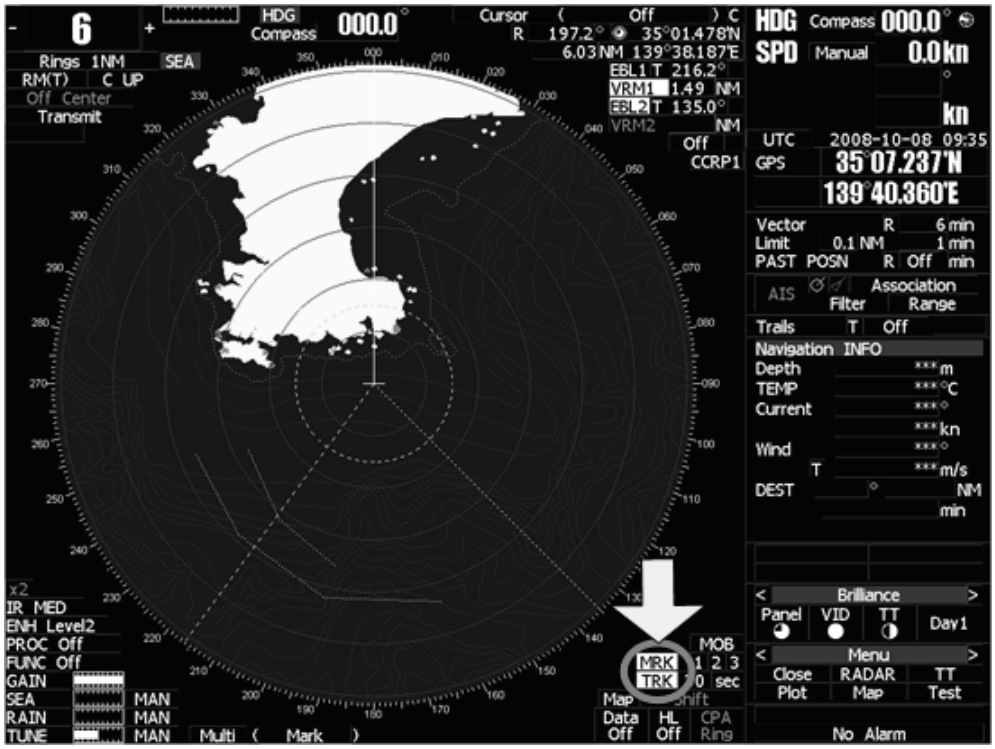
Procedure

1. Change Multi-dial mode to “Mark” / “Line”.

3.1.6 How to Change Multi-dial Modes (Page 3-9)

2. Turn the [MULTI] dial.

The color of the word Mark shown at the lower right corner of the screen is the resulting color.



Related Topics

- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.8 How to Change the Color of Marks / Lines (plotter mode) (Page 3-65)
- 3.3.10 How to Change the Color of Mark / Line (synthesis mode) (Method 2) (Page 3-67)

3.3.10 How to Change the Color of Mark / Line (synthesis mode) (Method 2)

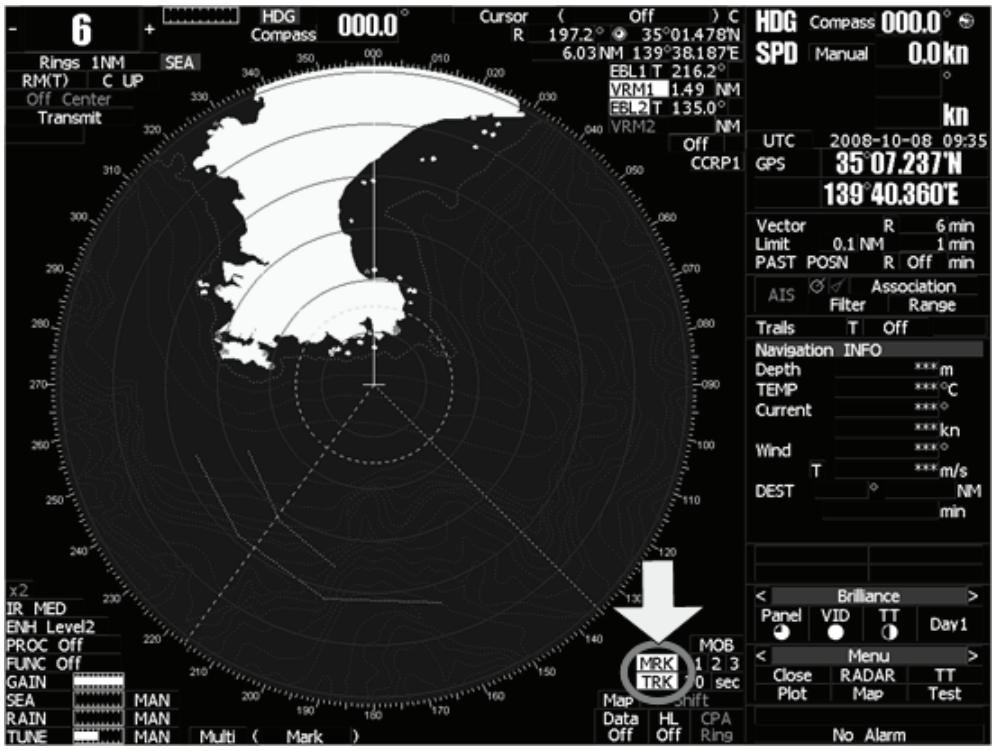
Prerequisite

- **Synthesis mode.**

Procedure

1. **Select the Mark button at the lower right of the display (repeat this step until the desired color is displayed).**

   The color of the word Mark shown at the lower right corner of the screen is the resulting color.



Related Topics

- 3.3.3 How to Input a Mark (Page 3-56)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.4 How to Input a Line (Page 3-58)
- 3.3.5 Deleting a mark or line (Page 3-61)
- 3.3.6 How to Change the Type of Marks / Lines (Page 3-63)
- 3.3.8 How to Change the Color of Marks / Lines (plotter mode) (Page 3-65)
- 3.3.9 How to Change the Color of Mark / Line (synthesis mode) (Method 1) (Page 3-66)

3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color

Prerequisite

- **Check other display-related settings.**

  > 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)

⚠ CAUTION

• Settings made here will be applied to both marks and lines.

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 2. Mark Setting .

- **To turn on / off the display by shape:**

  1. Select the 1. Display Mark Type .

2. Select:

When **All** is on:

All settings will be given priority and the Other will be ignored.
In other words, marks and lines will be displayed regardless of the shapes.

When **All** is off:

The Other will be given priority and All settings will be ignored.
In other words, marks and lines will be displayed according to the settings to each shape.

- **To turn on / off the display by color:**

1. Select the 2. Display Mark Color .

2. Select:

When **All** is on:

All settings will be given priority and the Other will be ignored.
In other words, marks and lines will be displayed regardless of the colors.

When **All** is off:

The Other will be given priority and All settings will be ignored.
In other words, marks and lines will be displayed according to the settings to each color.

Related Topics

- 3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks (Page 3-71)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)

3.3.12 How to Turn On / Off the Display of Marks, Lines, and Own Tracks

Prerequisite

- **Plotter mode.**
- **Check other display settings for marks, lines, own tracks.**
  - > 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
  - > 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)
  - > 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)

⚠ CAUTION

• Marks saved on the card will be displayed regardless of the settings made here.

Procedure

- **On / off display of marks / lines.**

  1. Press the [MARK] key.

  Each pressing the key will change on / off display of all mark / line.

- **On / off display of own track.**

  1. Hold down the [MARK] key.

  The display of own tracks will be turned on / off every time this key is pressed.

Related Topics

- 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
- 3.2.1 How to Change the Color of Own Track or How to Turn Off the Track Display (Page 3-36)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)

3.3.13 How to Delete Mark / Line by Type / by Color

⚠ CAUTION
- **Deleted memory cannot be restored.**

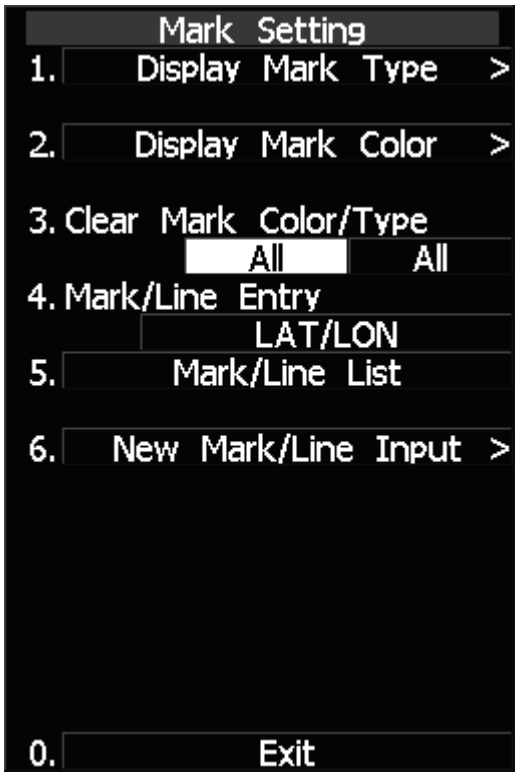
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu .

→ **Select the** 2. Mark Setting .

→ **Select the** 3. Clear Mark Color/Type .



2. Select a shape you wish to delete.

All : All mark / line will be deleted regardless of the shape.

Other : Mark / line of the selected shape will be deleted.

3. Select a color you wish to delete.

All : All mark / line will be deleted regardless of the color.

Other : Mark / line of the selected color will be deleted.

4. Select:

Yes : Memory of marks and lines having both the specified shape and color will be deleted.

No : Do not delete.

Related Topics

- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)
- 3.3.14 How to Delete Mark / Line Memory (Page 3-74)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)
- 3.6.11 How to Delete a Route Draft (Page 3-131)

3.3.14 How to Delete Mark / Line Memory

⚠ CAUTION
• **Deleted memory cannot be restored.**

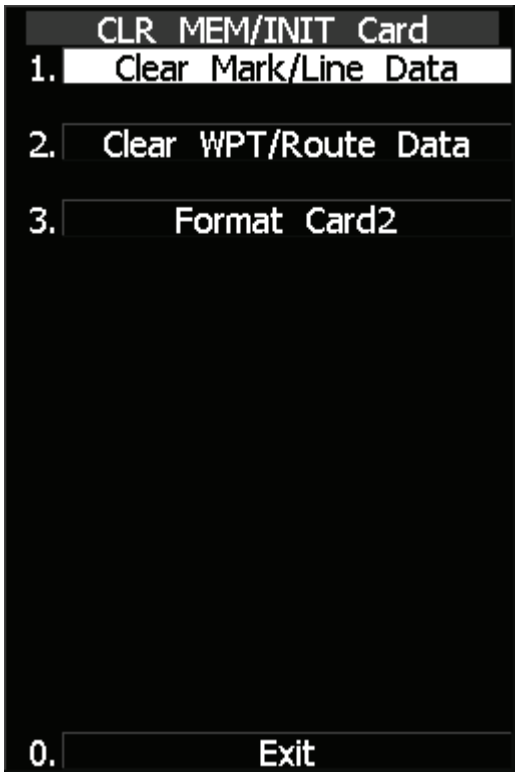
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 7. CLR MEM/INIT Card .

→ Select the 1. Clear Mark/Line Data .



2. Select:

Yes : Clear all mark / line memory.

No : Do not clear memory.

Related Topics

- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)
- 3.6.11 How to Delete a Route Draft (Page 3-131)

3.3.15 How to Change the Size of a Mark

Procedure

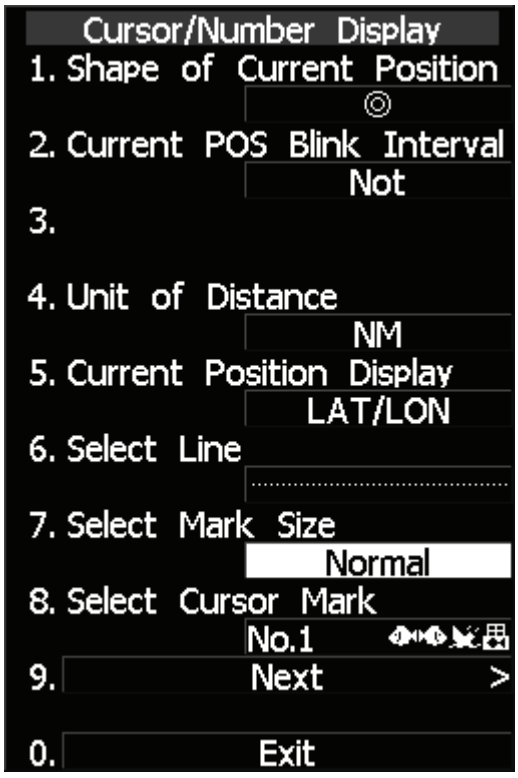
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 7. Select Mark Size .



2. Select:

Normal : The marks will become larger.

Small : The marks will become smaller.

Note

- **The size of part of marks cannot be changed.**

Related Topics

- 3.6.6 How to Change the Size of a Waypoint Mark (Page 3-124)

3.3.16 Edit Mark / Line List (Mark / Line List)

Overview

- **Marks / lines that are already inputted can be checked.**
- **Marks / lines can be created (by coordinate input).**
- **Marks / lines can be deleted.**
- **Comments can be added to marks / lines.**

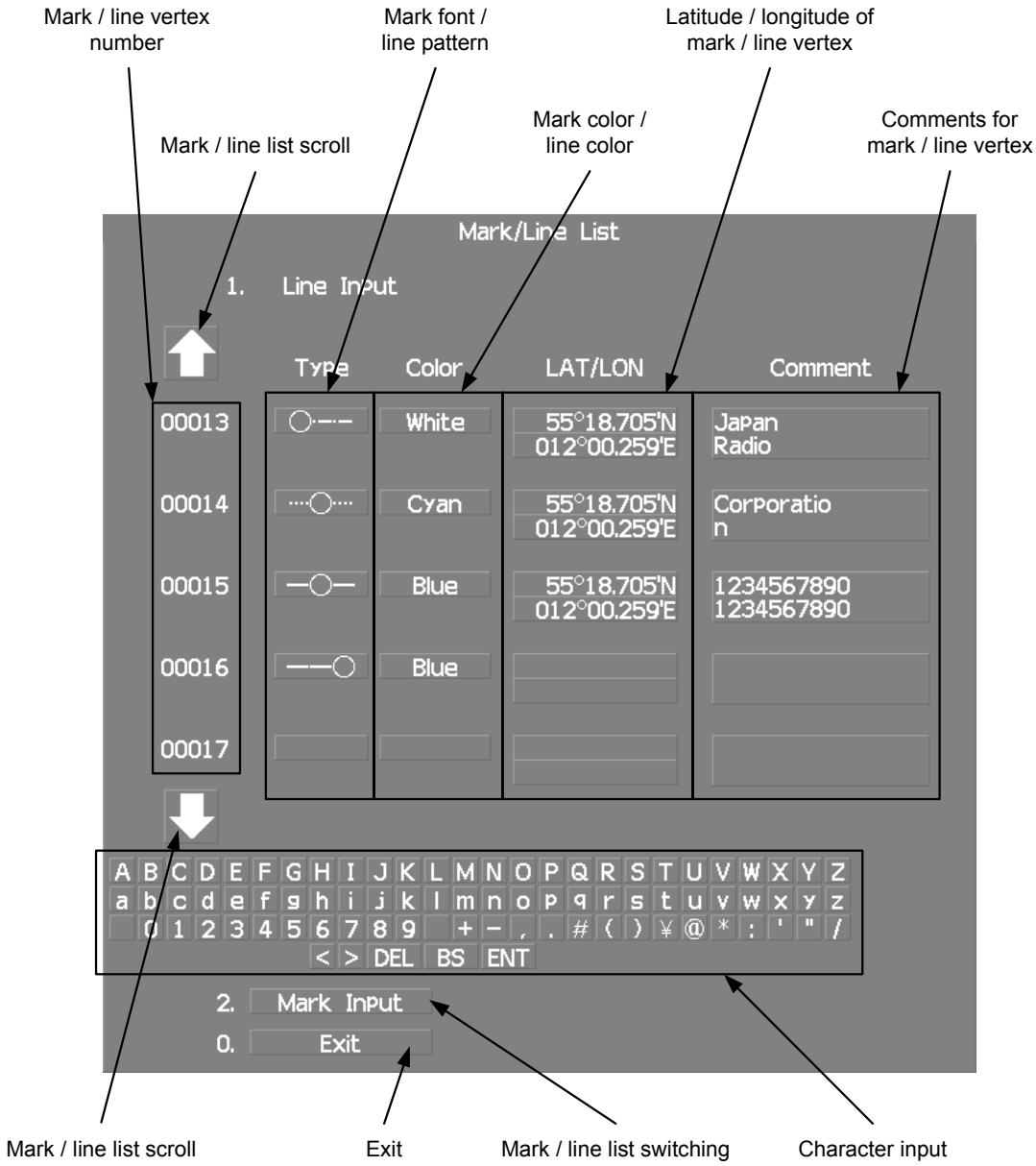
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 2. Mark Setting .

→ Select the 5. Mark/Line List .



- **To check marks / lines already inputted:**

  1. Scroll by pressing ↑ or ↓ .

  Marks / lines having coordinates position other than “0” are the ones already inputted.

- **To create a marks / lines:**

  1. Select coordinates position of the mark / line you wish to set.

  Scroll by pressing ↑ or ↓ .

  2. Input the coordinates position.

  3. Select the ENT button.

- **To delete a marks / lines:**

  1. Select coordinates of the mark / line you wish to delete.

  Scroll by pressing [↑] or [↓] .

  2. Input “0°N / 0°E”.

  3. Select the [ENT] button.

- **To add a comment to a marks / lines:**

  1. Select the mark / line that you wish to add a comment to.

  Scroll by pressing [↑] or [↓] .

  2. Input a comment.

  3. Select the [ENT] button.

3.3.17 How to Use a Marker

Prerequisite

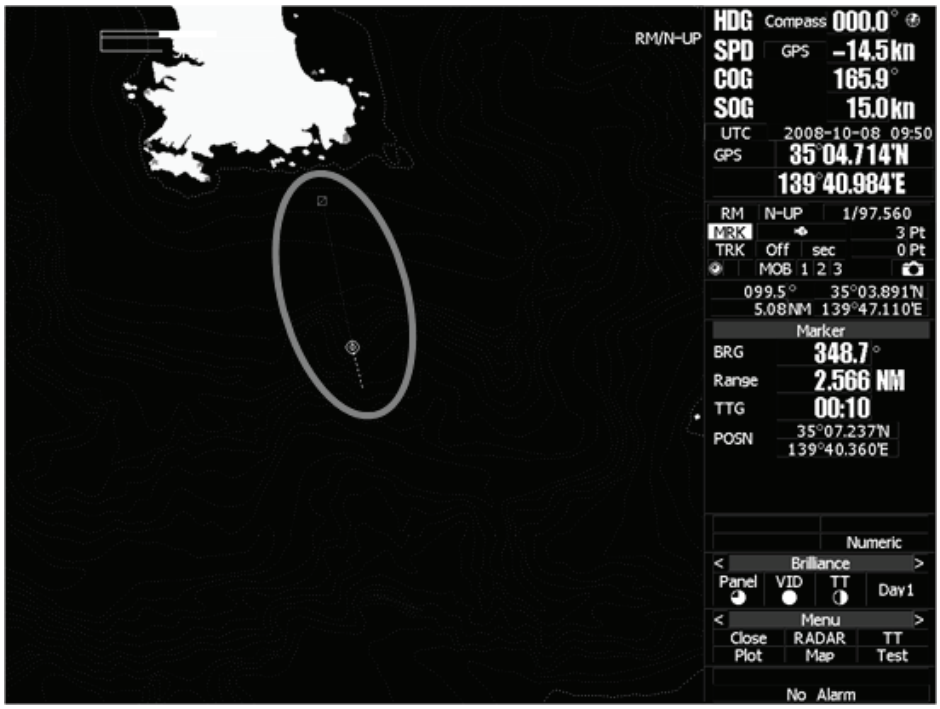
- **Own ship's position information has been acquired.**

Procedure

- **To input a marker:**

1. Press the [MOB] key.

When the key is pressed, an anchor mark will be displayed at own ship's position. When the ship moves, the mark and the ship will be connected by a line.



- **To delete a marker:**

1. Hold down the [MOB] key.

Note

- **The marker cannot be placed on any arbitrary points. It can only be put at own ship's position.**

Related Topics

- 3.1.17 How to Move the Screen to the Own Ship's Position / the Cursor Position (Page 3-24)

3.3.18 How to Set a Type of Event Mark

Procedure

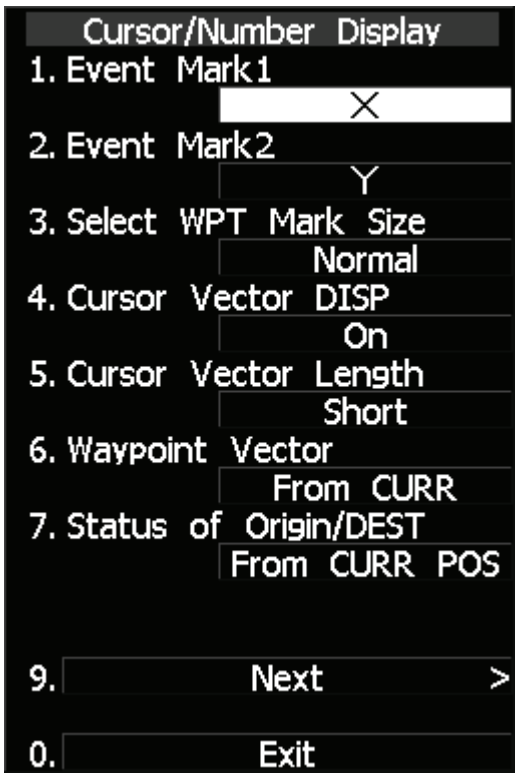
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .



2. Select 1. Event Mark1 / 2. Event Mark2 .

3. Select a desired type.

Note

- **It cannot modify Event Mark 3 other than .**

Related Topics

- 3.3.19 How to Use a Shortcut: Mark Setting (synthesis mode) (Page 3-81)

3.3.19 How to Use a Shortcut: Mark Setting (synthesis mode)

Prerequisite

- **Synthesis mode.**

Procedure

1. Hold down the [MARK] key.

Mark Setting menu opens.

Related Topics

- 3.3.11 How to Turn On / Off the Display of Mark / Line by Type / by Color (Page 3-68)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)

3.4 USING CARD

3.4.1 How to Use the Card (about File Manager)

Overview

- **Hereinafter, data refers to data such as own tracks, marks, lines, destination drafts, and route drafts.**
- **Card data can be checked.**
- **Internal data can be saved onto Card2.**
- **Data on Card2 can be added to the internal database or overwrite the internal database.**
- **Data can be copied from Card1 to Card2.**
- **Data on Card2 can be deleted.**
- **Data on Card2 can be displayed on hydrographic maps without adding the data to the internal database or overwriting the internal database.**

Prerequisite

- **A card has been inserted in the card slot.**

⚠ CAUTION

- **Deleted or overwritten data cannot be restored.**
- **Data on the card will be lost when the card is formatted (deletion of all data in card).**
- **File names “9998” and “9999” are reserved for automatic backup.**
  3.4.2 How to Automatically Save Own Tracks, Marks, Lines, Destination Drafts, Route Drafts, and Target Tracks onto Card 2 (Page 3-87)

Procedure

1. Press the [RADAR MENU] key.

→ Select the [9. Plot Menu] .

→ Select the [6. MEM CAPA/Copy] .

- **To call up the content of Card 1 / Card 2:**

  1. Select the Show Card1 / Show Card2 .

  Card content will be displayed in the lower right window (Refer to Note for data format).

- **To display the Own Track/Mark of Card 2.**

  The contents of card 2 are displayed without data transfer.

  1. Select the Card2 Own Track Display / Card2 Mark Display .

  2. Input the file name (value) of Card 2 to be displayed.

  → Select the ENT .

  3. Select:

  Yes : Display Own Track/Mark.

  No : Do not display.

- **To transfer internal memory to Card 2:**

  1. Select the [Copy Internal -> Card2] .

  2. Select:.

  [All] : Transfer Own Track, Mark/Line, WPT, Route, Target Track.
  [Other] : Transfers only the selected data type.

  3. Input the file name (value) after transmission.
  → **Select the [ENT] .**

  4. Select:

  [Yes] : Transfer memory.
  [No] : Do not transfer memory.

- **To transfer Card 2 content to the internal database:**

  1. Select the [Copy Card2 -> Internal] .

  2. Select:.

  [Overwrite]: Overwrite data.
  [Add]: Add new data.

  3. Input the file name (value) of Card to be copied.
  → **Select the [ENT] .**

  4. Select:

  [Yes] : Transfer the file.
  [No] : Do not transfer the file.

- **To copy the content of Card 1 to Card 2:**

  1. Select the [Copy Card1->Card2] .

  2. Input the file name (value) of Card 1 to be copied.
  → **Select the [ENT] .**

  3. Input the file name (value) of Card 2 to be copied.
  → **Select the [ENT] .**

  4. Select:

  [Yes] : Transfer the file.
  [No] : Do not transfer the file.

- **To erase files in Card 2:**

  Deleted memory cannot be restored.

  1. Select the Clear File .

  2. Input the file name (value) of Card 2 to be erased.

  → Select the ENT .

  3. Select:

  Yes : Erase files.
  No : Do not erase files.

Note

- **The window at the lower left of the screen Memory Content shows the remaining space for the internal database.**

  Information format is as follows:

  Total : The total number of values (with the unit removed) of the internal data.
  Track : The number of pieces of own track data internally stored.
  Remain : The number of pieces of own track data that can be additionally stored.
  Mark/Line : The total number of pieces of mark and line data internally stored.
  Remain : The number of pieces of mark and line data that can be additionally stored.
  WPT : The total number of pieces of destination draft data internally stored.
  Remain : The number of pieces of destination draft data that can be additionally stored.
  Route : The total number of piecies of route draft data internally stored.
  Remain : The number of pieces of route draft data that can be additionally stored.
  Card Remain : Number of own track units converted from the remaining capacity of the card

  * Data on device will be displayed in the information window.

Related Topics

- 3.4.2 How to Automatically Save Own Tracks, Marks, Lines, Destination Drafts, Route Drafts, and Target Tracks onto Card 2 (Page 3-87)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)
- 3.3.14 How to Delete Mark / Line Memory (Page 3-74)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)
- 3.6.11 How to Delete a Route Draft (Page 3-131)

3.4.2 How to Automatically Save Own Tracks, Marks, Lines, Destination Drafts, Route Drafts, and Target Tracks onto Card 2

Prerequisite

- **Card has been inserted in Card Slot 2.**

⚠ CAUTION

- **Data is automatically saved onto Card when the system is started. Therefore, data from the previous operation will be saved onto the card when the system is restarted.**
- **Data is always saved in File 9998 or File 9999. Therefore, File 9998 and File 9999 are subject to being overwritten.**

Procedure

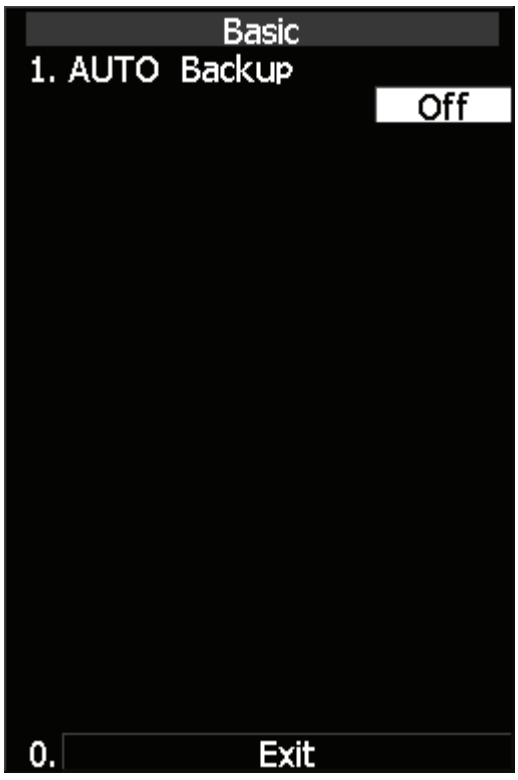
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 3. Basic .

→ Select the 1. AUTO Backup .



2. Select:

Off	: Do not automatically backup data.
On	: Data is automatically backed up.

Related Topics

- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)

3.4.3 How to format Card 2

Prerequisite

- **Card has been inserted in Card Slot 2.**

⚠ CAUTION

- **Data on the card will be lost when the card is formatted (deletion of all data in memory).**

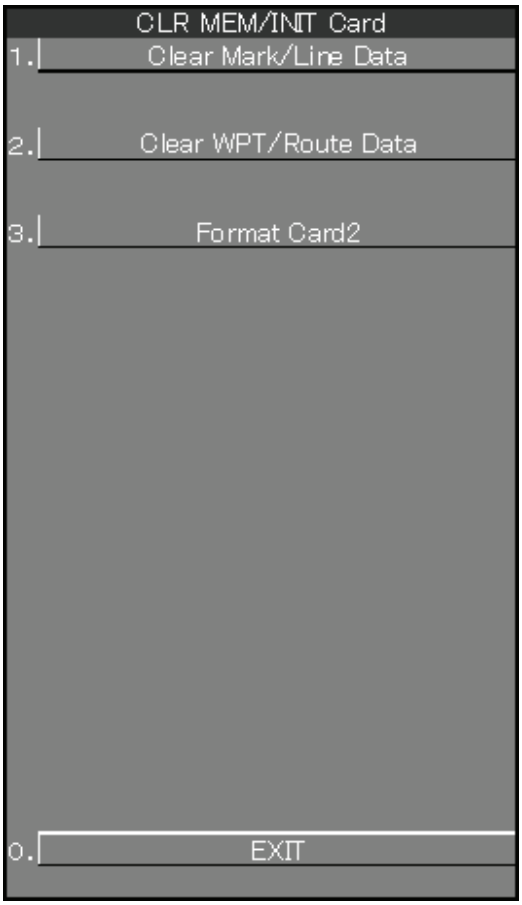
Procedure

1. Press the [Radar Menu] key.

→ Select the 9. Plot Menu .

→ Select the 7. CLR MEM/INIT Card .

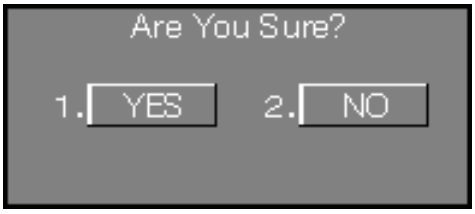
→ Select the 3. Format Card2 .



2. Select:

Yes : Format the card (delete everything in memory)

No : Do not format (delete everything in memory) the card.



Related Topics

• 3.4.1 How to Use the Card (about File Manager) (Page 3-82)

3.5 DISPLAY SIMPLE CHART

3.5.1 How to Fill in a Hydrographic Map

Prerequisite

- **A hydrographic map card has been inserted in a card slot.**

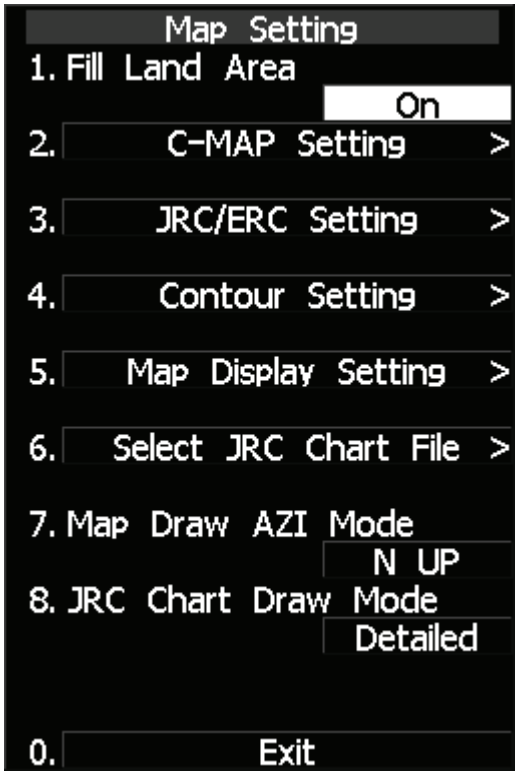
Procedure

1. Press the [RDAR MENU] key.

→ **Select the** 9. Plot Menu .

→ **Select the** 5. Map Setting .

→ **Select the** 1. Fill Land Area .



2. Select:

On : Fill in the map.

Off : Do not fill in the map.

Related Topics

- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card

Prerequisite

- **JRC / ERC hydrographic map card has been inserted in a card slot.**

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu .

→ **Select the** 5. Map Setting .

→ **Select the** 3. JRC/ERC Setting .

2. Set a color or select Off (display off) for each item:

2. Color of Land	: Color of a line defining the shape of the land.
3. Bright of Land	: Brightness of a line defining the shape of the land.
4. Color of Sea	: A color to fill in the sea area.
5. Bright of Sea	: Brightness of the color that fills in the sea area. 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
6. Color of Name	: Color of a place name.

7. Bright of Name	: Brightness of a place name.
8. Bright of Track/Mark/Line	: Brightness of a place name.

Note

- **Several setting pattern of color and brightness can be saved by selecting day / night.**

  > 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)

- **The patterns set by day/night can be applied by the [DAY/NIGHT] key.**

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card

Prerequisite

- **JRC / ERC hydrographic map card has been inserted in a card slot.**

Procedure

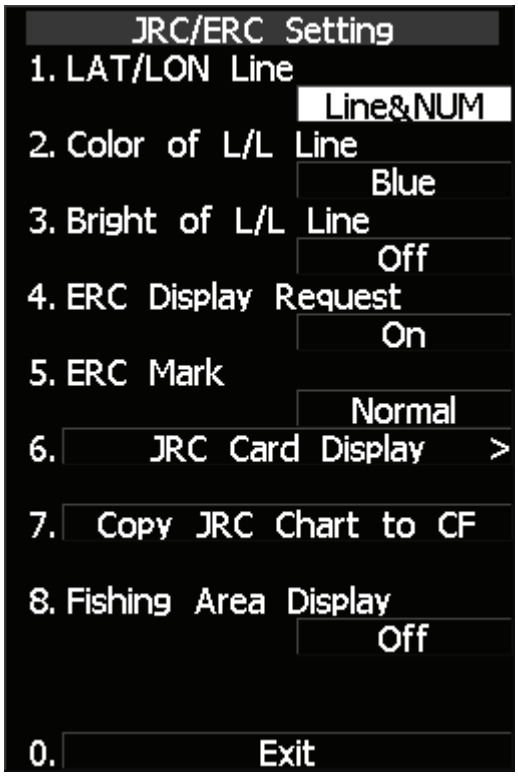
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 5. Map Setting .

→ Select the 3. JRC/ERC Setting .

→ Select the 9. Next .



- **Setting of calling up numeric values for latitude and longitude lines.**

1. Select 1. LAT/LON Line .

Line&NUM : Call up latitude and longitude lines, and numerical values for them.

NUM : Call up only latitudes and longitudes.

- **Setting of the color of latitude and longitude lines.**

  1. Select 2. Color of L/L Line .

  Latitude and longitude lines will be displayed in the selected colors.

- **Setting of the brightness of latitude and longitude lines.**

  1. Select 3. Bright of L/L Line .

  Off : Do not display latitudes and longitudes.

  Other : Display latitudes and longitudes with the selected brightness.

Note

- **Several setting pattern of coLORANd brightness can be saved by selecting day / night.**

  > 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)

- **The patterns set by day/night can be applied by the [DAY/NIGHT] key.**

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card

Prerequisite

- **JRC coastline ROM card has been inserted in a card slot.**

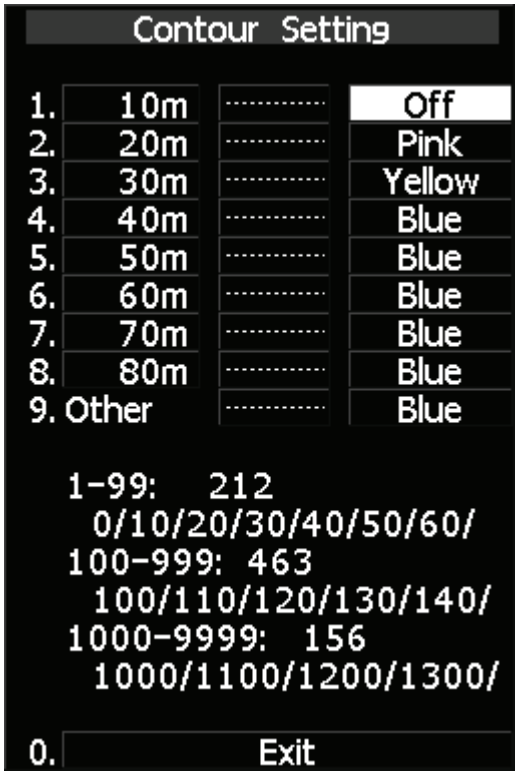
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 5. Map Setting .

→ Select the 4. Contour Setting .



2. To set a depth:

For setting of a depth, see the following note.

3. To set a contour:

The type of line for displaying the depth contour corresponding to the depth is set.

4. To set a color:

Off : Do not display.

Other : Display contours in the selected color.

When a color is set to **9. Other** , all contours excluding the ones already specified will be displayed.

Note

- **Some cards may not have depth data.**
- **If a depth not saved on the card is specified, contours will not be displayed.**
- **A description below the menu shows the depth data saved on the card.**

Information format is as follows:

[Target depth (in meters)] : [The total number of contours saved]
["Sample" of depths (in meters) corresponding to the saved contours] …

"Sample" is only part of saved depth data.
There may be other depths saved, differing from the shown sample, but there is no method for knowing all of them all at once.

Sample:
1-99: 755
5/10/11/20/30/40/50/
100-999: 125
100/110/120/130/140/
1000-9999: 71
1000/1100/1200/1300/

The displays above show the following:

There are 755 contours between depths of 1 and 99 meters, and
at a minimum, contours are assigned to the depths: 5, 10, 11, 20, 30, 40, and 50 meters.
There are 125 contours between depths of 100 to 999 meters, and
at a minimum, contours are assigned to the depths: 100, 110, 120, 130, and 140 meters.
There are 71 contours between depths of 1,000 to 9,999 meters, and
at a minimum, contours are assigned to the depths: 1,000, 1,100, 1,200, and 1,300 meters.

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card

Prerequisite

- **JRC coastline ROM card has been inserted in a card slot.**

Procedure

1. Press the [RADAR MENU] key.

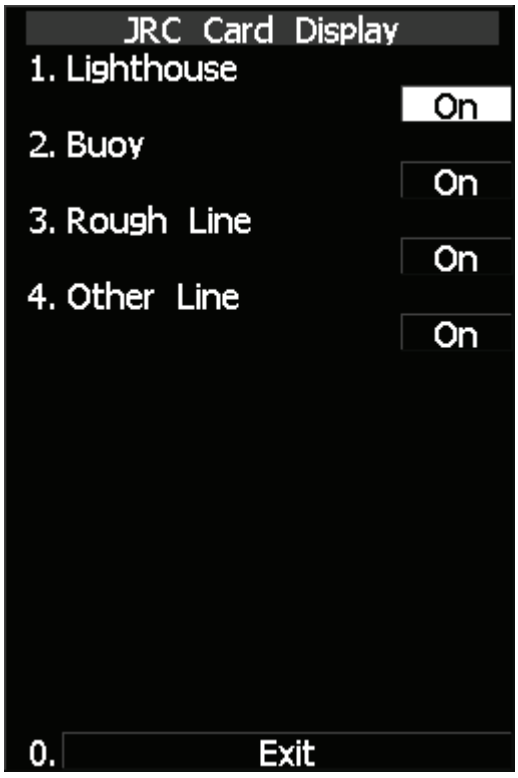
→ Select the [9. Plot Menu] .

→ Select the [5. Map Setting] .

→ Select the [3. JRC/ERC Setting] .

→ Select the [9. Next] .

→ Select the [6. JRC Card Display] .



- **To turn on / off the display of lighthouses:**

1. Select the [1. Lighthouse] .

[On] : Display lighthouses.

[Off] : Do not display lighthouses.

- **To turn on / off the display of buoys:**

  1. Select the 2. Buoy .

  On : Display buoys.

  Off : Do not display buoys.

- **To turn on / off the display of other lines:**

  1. Select the 3. Rough Line .

  On : Display rough lines.

  Off : Do not display rough lines.

- **To turn on / off the display of other lines:**

  1. Select the 4. Other Line .

  On : Display other types of information.

  Off : Do not display other types of information.

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.6 How to Make Mark Display Settings for ERC

Prerequisite

- **ERC hydrographic map card has been inserted in a card slot.**

Procedure

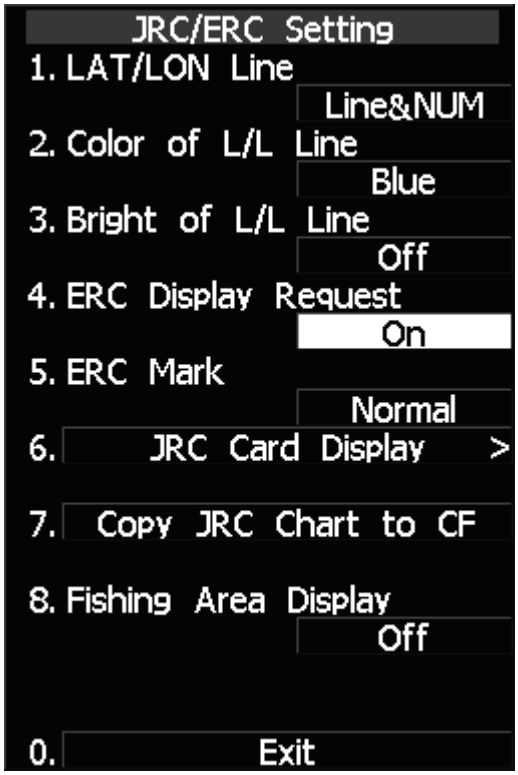
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 5. Map Setting .

→ Select the 3. JRC/ERC Setting .

→ Select the 9. Next .



- **To turn on / off the mark display in ERC hydrographic maps:**

1. Select the 4. ERC Display Request .

On : Marks will be displayed in ERC hydrographic maps.

Off : Marks will not be displayed.

- **To set mark size:**

  1. Select the 5. ERC Mark .

  Normal : Large marks will be displayed in ERC chart maps.

  Small : Small marks will be displayed in ERC chart maps.

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.7 How to Make C-MAP Card Display Setting (Page 3-104)

3.5.7 How to Make C-MAP Card Display Setting

Prerequisite

- **C-MAP card has been inserted in a card slot.**

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **5. Map Setting** **.**

→ **Select the** **2. C-MAP Setting** **.**

- **To turn on / off the display of latitude lines and longitude lines:**

  1. Select the **1. Grid Display** **.**

  On : Display latitude lines and longitude lines.

  Off : Do not display.

- **To turn on / off the display of water depth:**

  1. Select the **2. Sounding Display** **.**

  On : Display the depth value.

  Off : Do not diplay.

- **To set the unit of water depth:**

  1. Select the 3. Sounding Unit .

  Feet / Fathom / Meters / Decimal Fathom

- **To turn on / off the display of lighthouse lighting range:**

  1. Select the 4. Light Sectors Display .

  On : A circle of lighting range will be displayed when the specified Light 5. Sectors Level is met.

  Off : Do not display.

- **To set a threshold for displaying the lighting range:**

  Lighthouses that meet the selected threshold level will be displayed when the Light Sectors Display is on.

  1. Select the 5. Light Sectors Level .

  Select from among A/B/C/D/E/F/G/H.

Related Topics

- 3.5.1 How to Fill in a Hydrographic Map (Page 3-91)
- 3.5.2 How to Change the Color of, or how to Turn Off the Display of Coastline / place names saved on a JRC / ERC card (Page 3-93)
- 3.5.3 How to Call up Latitude Lines and Longitude Lines Saved on a JRC / ERC Card (Page 3-95)
- 3.5.4 How to Change the Color of, or how to Turn Off the Display of Contours in JRC Coastline ROM Card (Page 3-97)
- 3.5.5 How to Make Mark Display Settings for JRC Coastline ROM Card (Page 3-100)
- 3.5.6 How to Make Mark Display Settings for ERC (Page 3-102)

3.5.8 How to Correct the Latitude / Longitude Position

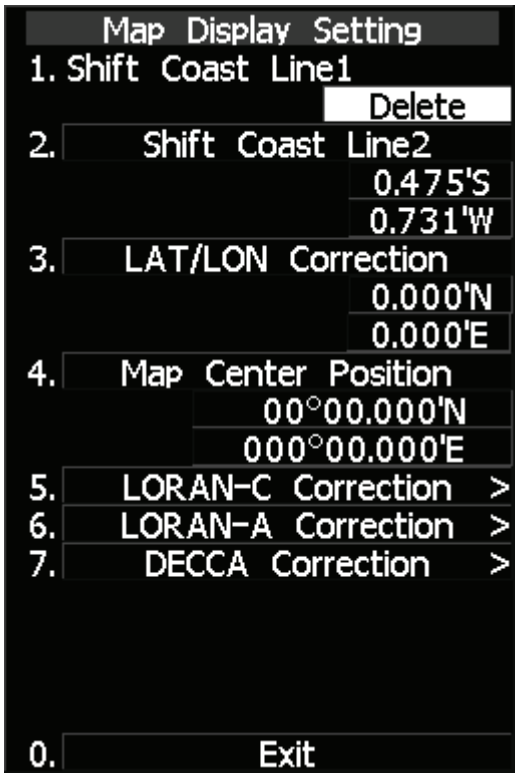
Procedure

1. Press the [RADAR MENU] key.

→ Select the [9. Plot Menu] .

→ Select the [5. Map Setting] .

→ Select the [5. Map Display Setting] .



- **To adjust the latitude and longitude on the hydrographic map:**

  The position of latitude and longitude displayed on the hydrographic map will be corrected.

- **To adjust using the cursor:**

  1. Select the [Set] from the [1. Shift Coast Line 1] .

  2. Select the same target on the map and on the echo screen.

  3. Use the cursor to specify the target on the map.

  4. Use the cursor to specify the target on the echo screen.

- **To adjust by inputting numerical values:**

  1. Select the 2. Shift Coast Line 2 .

  2. Input the offset value in the latitude direction.

  3. Input the offset value in the longitude direction.

- **To cancel:**

  1. Select the Delete from the 1. Shift Coast Line 1 .

- **To adjust the latitude and longitude of own ship's position:**

  Adjust own ship's position to match the input from GPS.

  1. Select the 3. LAT/LON Correction .

  2. Input the offset value in the latitude direction.

  3. Input the offset value in the longitude direction.

- **To create a temporary input for the time when there is no own ship's position input from GPS (valid only for plotter mode):**

  1. Select the 4. Map Center Position .

  2. Input the latitude value.

  3. Input the longitude value.

  The input from GPS is adopted by priority when there is own ship's position input from GPS.

Related Topics

- 3.5.9 How to Correct the LORAN A Position (Page 3-108)
- 3.5.10 How to Correct the LORAN C Position (Page 3-110)

3.5.9 How to Correct the LORAN A Position

Prerequisite

- **Operator must have knowledge about LORAN A.**
  > This instruction manual will not provide any explanation on LORAN.

Procedure

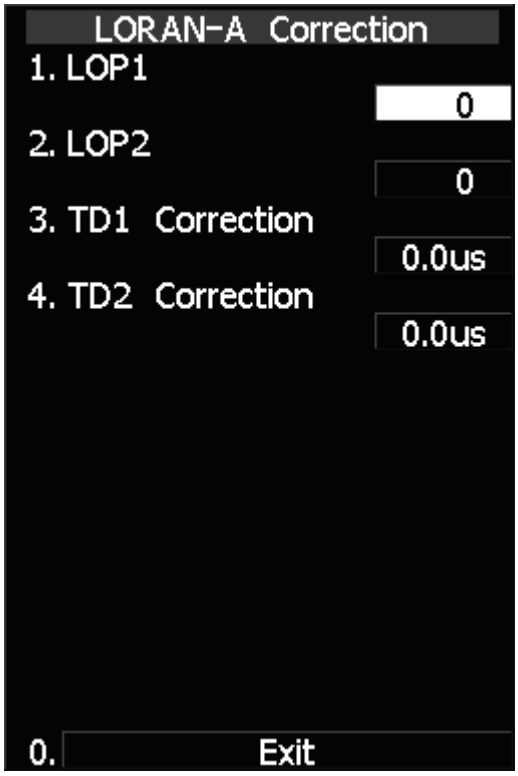
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 5. Map Setting .

→ Select the 5. Map Display Setting .

→ Select the 6. LORAN-A Correction .



- **To set LOP1:**

  1. Select the 1. LOP1 .

  2. Input the value.

- **To set LOP2:**

  1. Select the 2. LOP2 .

  2. Input the value.

- **To set TD1 correction:**

  1. Select 3. TD1 Correction .

  2. Input the value.

- **To set TD2 correction:**

  1. Select 4. TD2 Correction .

  2. Input the value.

Related Topics

- 3.5.10 How to Correct the LORAN C Position (Page 3-110)
- 3.5.8 How to Correct the Latitude / Longitude Position (Page 3-106)

3.5.10 How to Correct the LORAN C Position

Prerequisite

- **Operator must have knowledge about LORAN C.**
  > This instruction manual will not provide any explanation on LORAN.

Procedure

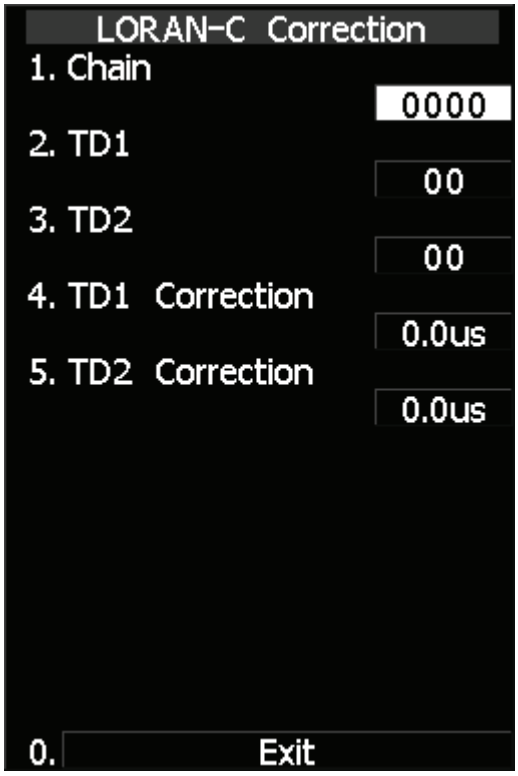
1. Press the [RADAR MENU] key.

→ Select the [9. Plot Menu] .

→ Select the [5. Map Setting] .

→ Select the [5. Map Display Setting] .

→ Select the [5. LORAN-C Correction] .



- **To set chain:**

  1. Select the [1. Chain] .

  2. Input the value.

- **To set TD1:**

  1. Select the [2. TD1] .

  2. Input the value.

- **To set TD2:**

  1. Select the 3. TD2 .

  2. Input the value.

- **To set TD1 correction:**

  1. Select the 4. TD1 Correction .

  2. Input the value.

- **To set TD2 correction:**

  1. Select the 5. TD2 Correction .

  2. Input the value.

Related Topics

- 3.5.9 How to Correct the LORAN A Position (Page 3-108)
- 3.5.8 How to Correct the Latitude / Longitude Position (Page 3-106)

3.5.11 How to Correct the DECCA

Prerequisite

- **Operators should be familiar with the DECCA.**
  > LORAN is not explained in this manual.

Procedure

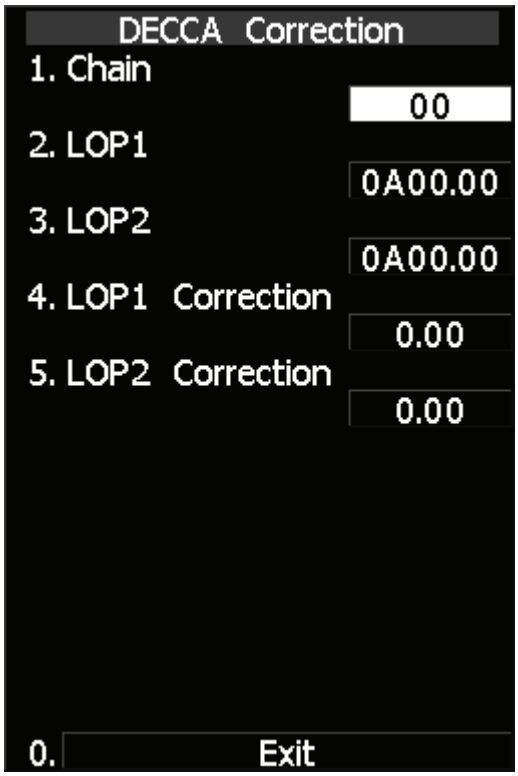
1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 5. Map Setting .

→ Select the 5. Map Display Setting .

→ Select the 7. DECCA Correction .



- **To set chain:**

  1. Select 1. Chain .

  2. Input the value.

- **To set LOP1:**

  1. Select 2. LOP1 .

2. Input the value.

- **To set LOP2:**

  1. Select 3. LOP2 .

  2. Input the value.

- **To set LOP1 correction:**

  1. Select 4. LOP1 Correction .

  2. Input the value.

- **To set LOP2 correction:**

  1. Select 5. LOP2 Correction .

  2. Input the value.

Related Topics

- 3.5.9 How to Correct the LORAN A Position (Page 3-108)
- 3.5.10 How to Correct the LORAN C Position (Page 3-110)
- 3.5.8 How to Correct the Latitude / Longitude Position (Page 3-106)

3.6 USE ROUTE FUNCTION

3.6.1 How to Create a Destination Draft

Prerequisite

- **Keyboard assignment pattern 1 or 2 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

Procedure

1. **Move the cursor to the point you wish to set as a destination draft.**
2. **Press the [DEST] key.**
3. **Input the number of the destination draft to be set.**
4. **Press the [ENT] key.**

◇ will be displayed on the sea chart.
Already inputted destination numbers cannot be inputted.

3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.7 How to set the display of destination draft numbers (Page 3-125)
- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)

3.6.2 How to Delete a Destination Draft

Prerequisite

- **Keyboard assignment pattern 1 or 2 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- **Destination drafts to be deleted are not set as focused routes.**
  > 3.6.14 How to Cancel the Focused Route (Page 3-135)

Procedure

- **To specify the number of a destination draft and delete that destination:**

  1. Press the [DEST] key.

  2. Input the number of the destination draft to be delected.

  3. Press the [CLR] key.

- **To specify the destination draft with the cursor and delete that destination draft:**

  1. Press the [DEST] key.

  2. Move the cursor to the destination draft.

  3. Press the [CLR] key.

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.2 How to Delete a Destination Draft (Page 3-115)
- 3.6.7 How to set the display of destination draft numbers (Page 3-125)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)

3.6.3 Waypoint Input Manager
How to Add a Comment to a Waypoint
How to Check Destination Draft Numbers

Overview

- **Destination draft numbers that are already inputted can be checked.**
- **Destination draft can be created (by coordinate input / LORAN input).**
- **Destination draft can be deleted.**
- **Comments can be added to destination draft.**

Procedure

1. Press the [RADAR MENU] key.

→ Select the [9. Plot Menu] .

→ Select the [3. WPT/Route Setting] .

→ Select the [6. Waypoint Input] .

- **To check destination numbers already inputted:**

  1. Scroll by pressing [↑] or [↓] .

  Destinations having coordinates or LORAN position other than “0” are the ones already inputted.

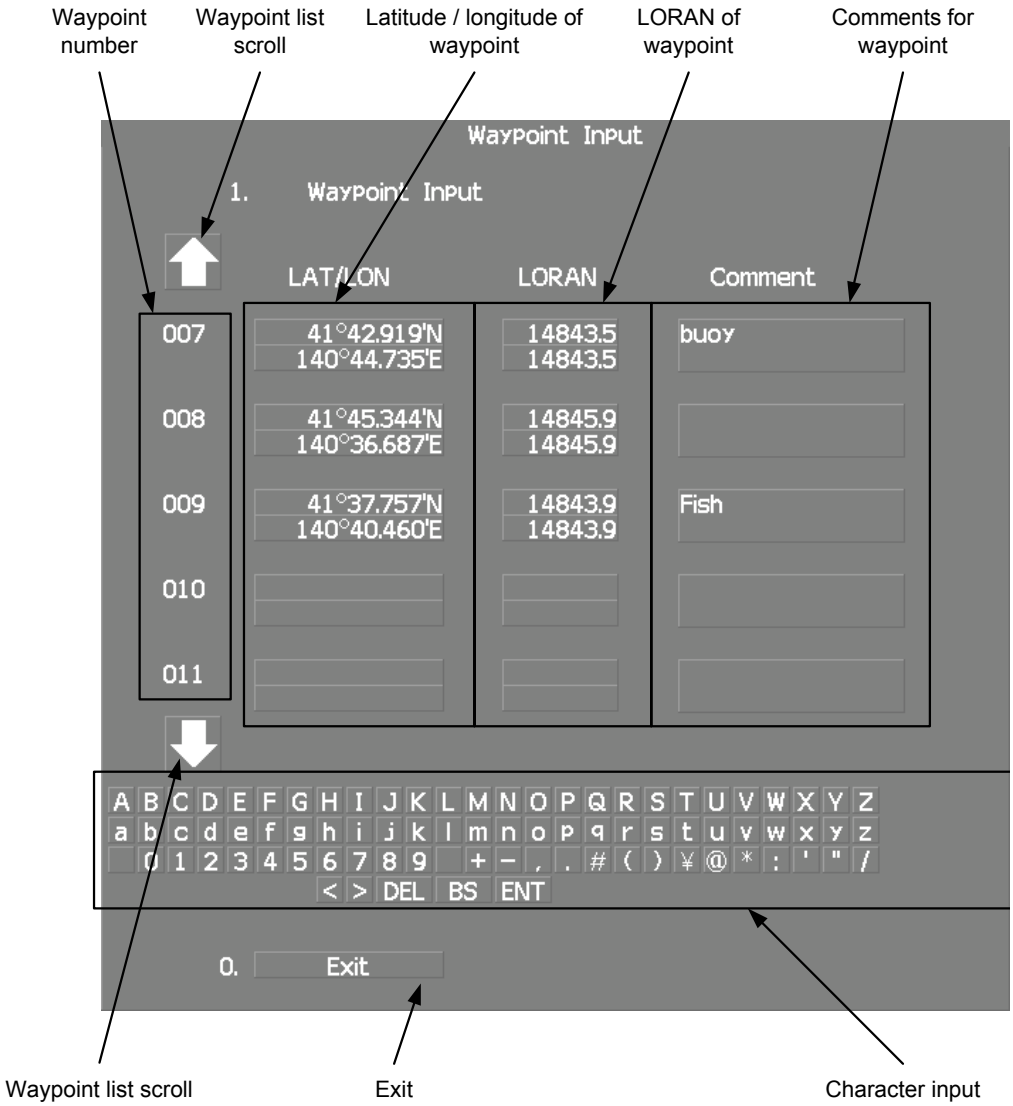
- **To create a destination draft:**

  1. Select coordinates or LORAN position of the destination draft number you wish to set.

  Scroll by pressing [↑] or [↓] .

  2. Input the coordinates or LORAN position.

  3. Select the [ENT] .



- **To delete a destination draft:**

  1. Select coordinates of the destination draft number you wish to delete.

  Scroll by pressing ↑ or ↓ .

  2. Input "0°N / 0°E".

  3. Select the ENT .

  Destination draft cannot be deleted if they are set as the focused route.

3.6.14 How to Cancel the Focused Route (Page 3-135)

- **To add a comment to a destination draft:**

  1. Select the destination draft number that you wish to add a comment to.

  Scroll by pressing [↑] or [↓] .

  2. Input a comment.

  3. Select the [ENT] .

Note

- **The way to select Destination Draft Manager will change by using the menu, Way Point Input Select.**

Related Topics

- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.2 How to Delete a Destination Draft (Page 3-115)
- 3.6.7 How to set the display of destination draft numbers (Page 3-125)

3.6.4 How to Set / Cancel a Destination Draft as a Destination

Overview

- **The following functions can be applied to a destination by setting a destination draft as a destination:**
- **A destination will be displayed as ◈ .**
- **The direction of a destination can be corresponded to the upward direction of the screen.**
  > 3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
- **The azimuth, distance, estimated arrival time to the destination can be displayed.**
  > 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- **The destination azimuth vector to the destination can be set.**
  > 3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
- **The alarm mode for arrival at / departure from the destination can be set.**
  > 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

Prerequisite

- **Keyboard assignment pattern 2 alpplied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

⚠ CAUTION

- **This operation will clear the temporary route.**
  3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)
- **The destination will be set to the focused route as a route draft of Route Draft 11.**
  3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

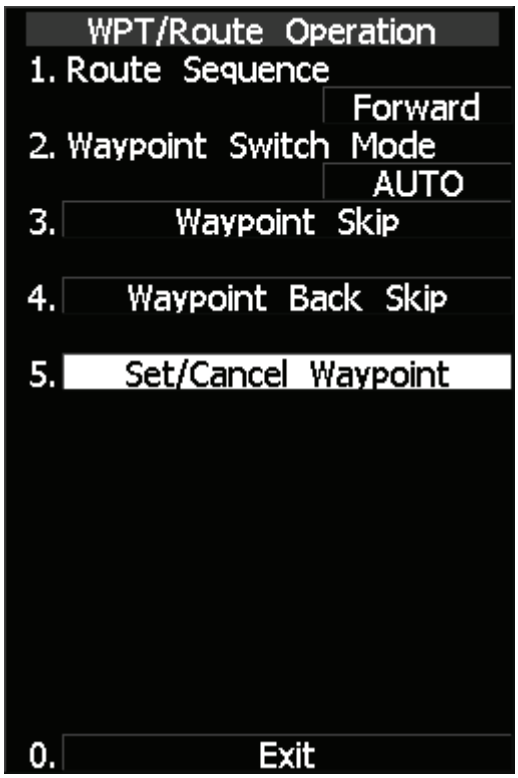
- **How to set:**

1. Press the [RADAR MENU] key.

→ **Select the** 9. Plot Menu **.**

→ **Select the** 4. WPT/Route Operation **.**

→ **Select the** 5. Set/Cancel Waypoint **.**



2. Input the destination draft number you wish to set as a destination.

3. Press the [->O] key.

A destination will be displayed as ◈ .

- **How to cancel:**

1. Move the cursor to the set destination.

2. Press the [->O] key.

Note

- **Only one destination can be set.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)
- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
- 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- 3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
- 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

3.6.5 How to Delete Destination Draft and Route Draft Memory

⚠ CAUTION

- **Deleted memory cannot be restored.**
- **Destination draft memory or route draft memory cannot be deleted individually.**

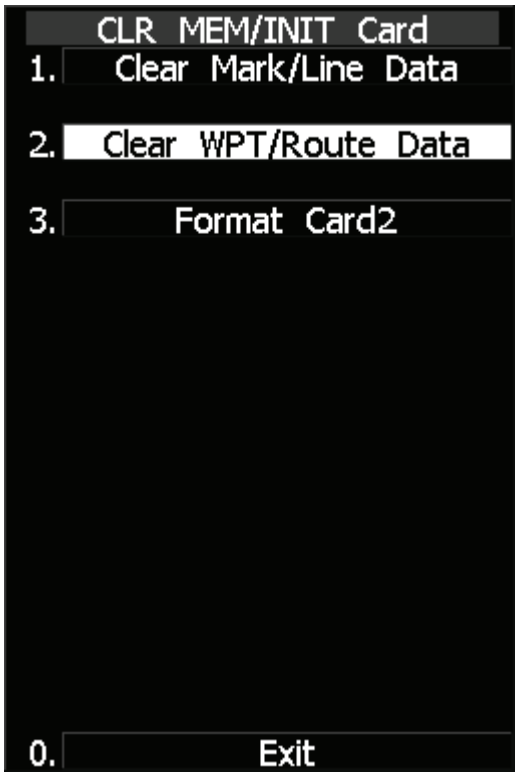
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** .

→ **Select the** **7. CLR MEM/INIT Card** .

→ **Select the** **2. Clear WPT/Route Data** .



2. Select:

Yes : Delete the memory.

No : Do not delete the memory.

Related Topics

- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)
- 3.3.14 How to Delete Mark / Line Memory (Page 3-74)
- 3.6.11 How to Delete a Route Draft (Page 3-131)
- 3.6.2 How to Delete a Destination Draft (Page 3-115)

3.6.6 How to Change the Size of a Waypoint Mark

Procedure

1. Press the [RADAR MENU] key.

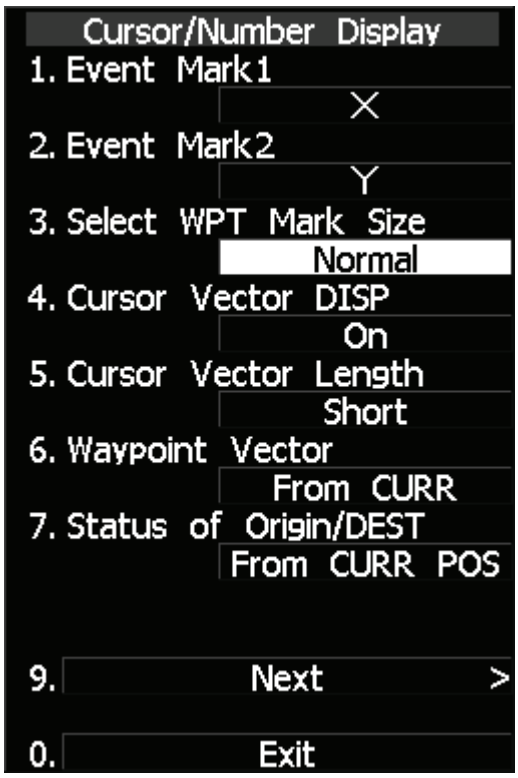
→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 3. Select WPT Mark Size .



2. Select:

Normal : Make the waypoint mark larger.

Small : Make the waypoint mark smaller.

Related Topics

- 3.3.15 How to Change the Size of a Mark (Page 3-75)
- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)

3.6.7 How to set the display of destination draft numbers

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

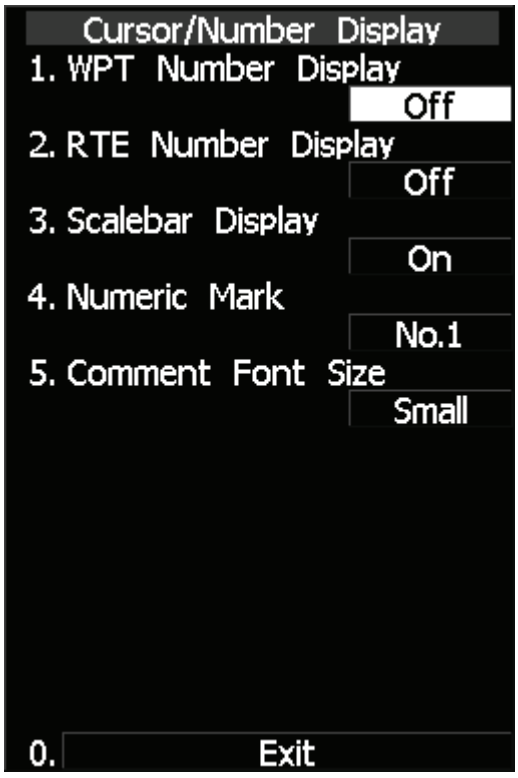
→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 9. Next .

→ Select the 1. WPT Number Display .



2. Select:

On : All destination draft numbers will be displayed.

Off : Only the destination draft number from 1 to 9 will be displayed.

Related Topics

- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.2 How to Delete a Destination Draft (Page 3-115)
- 3.6.22 How to Turn On / Off the Display of Route Draft Numbers (Page 3-151)

3.6.8 How to Set the Display Mode of the Destination Azimuth Vector

Prerequisite

- **A destination must exist.**
  - > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

1. Press the [RADAR MENU] key.

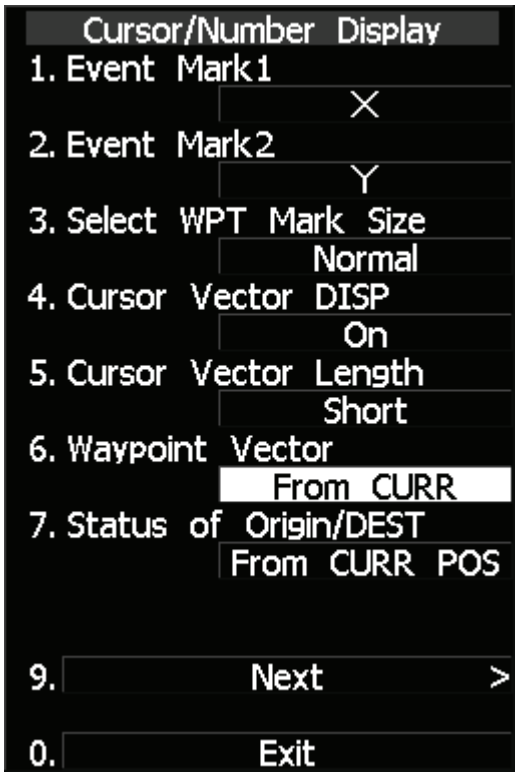
→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 6. Waypoint Vector .



Off : Vectors in the direction of the destination azimuth will not be displayed.

From Origin : A line from the previous destination to the next destination along the focused route will be displayed.

From CURR : A line from the ship to the destination will be displayed.

Related Topics

- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.6.9 How to Create a Route Draft (Method 1)

Prerequisite

- **A destination draft must exist.**

  > 3.6.1 How to Create a Destination Draft (Page 3-114)

Procedure

1. Change the keyboard setting to Assignment pattern 1.

3.1.8 Keyboard Assignment Patterns (Page 3-12)

2. Press the [DEST] key.

3. Input the route draft number you wish to set.

4. Press the [O->] key.

5. Input the destination numbers of passing points

→ **Press the [ENT] key (repeat this step for the number of passing points to be inputted)**

6. Press the [DEST] key.

Note

- **Up to 20 destination drafts can be included in each route draft.**
- **The same destination cannot be input more than once in each route draft.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.11 How to Delete a Route Draft (Page 3-131)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.6.10 How to Create a Route Draft (Method 2)

Prerequisite

- **A destination draft must exist.**

> 3.6.1 How to Create a Destination Draft (Page 3-114)

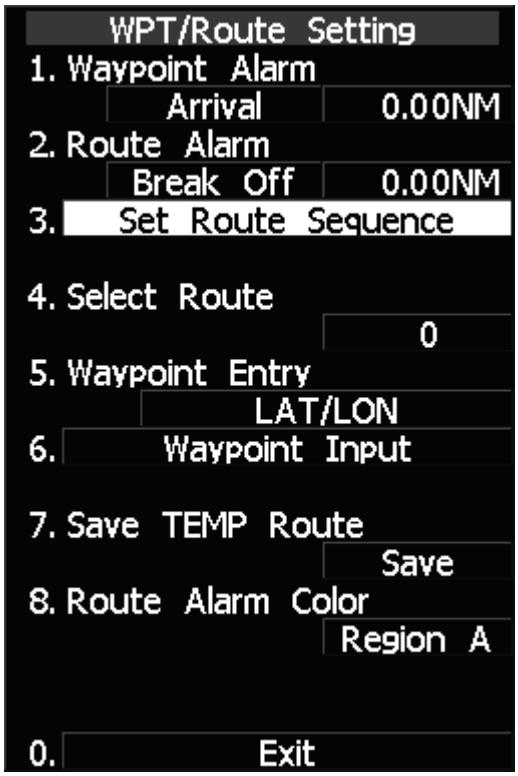
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 3. WPT/Route Setting .

→ Select the 3. Set Route Sequence .



2. Input the route draft number you wish to set.

→ Select the ENT .

3. Input the destination number of passing points

→ Select the ENT (repeat 20 times).

If there are less than 20 passing points to be set, then input “0” for the rest of the destination numbers.

Note

- **Up to 20 destination drafts can be included in each route draft.**
- **The same destination cannot be input more than once in each route draft.**

Related Topics

- 3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
- 3.6.1 How to Create a Destination Draft (Page 3-114)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.11 How to Delete a Route Draft (Page 3-131)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.6.11 How to Delete a Route Draft

⚠ CAUTION
- **Deleted memory cannot be restored.**

Prerequisite

- **Keyboard assignment pattern 1 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

Procedure

1. Change the keyboard setting to Assignment pattern 1.

3.1.8 Keyboard Assignment Patterns (Page 3-12)

2. Press the [DEST] key.

3. Input the route draft number to be deleted.

4. Press the [O->] key.
→ **Press the [CLR/INFO] key.**
→ **Press the [DEST] key.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.2.9 How to Delete Own Track Memory by Color (Page 3-50)
- 3.4.1 How to Use the Card (about File Manager) (Page 3-82)
- 3.3.13 How to Delete Mark / Line by Type / by Color (Page 3-72)
- 3.3.14 How to Delete Mark / Line Memory (Page 3-74)
- 3.6.5 How to Delete Destination Draft and Route Draft Memory (Page 3-122)

3.6.12 How to Set the Focused Route (Method 1)

Overview

- **The functions for the focused route can be applied by setting a route draft as the focused route.**
  > 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
  > 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)

Procedure

1. Change the keyboard setting to assignment pattern 1.

> 3.1.8 Keyboard Assignment Patterns (Page 3-12)

2. Press the [DEST] key.

3. Input the number of a route draft you wish to use.

4. Press the [O->] key.
→ **Press the [DEST] key.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.14 How to Cancel the Focused Route (Page 3-135)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
- 3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)
- 3.6.25 Example 1: How to Set a Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-155)
- 3.6.26 Example 2: How to Set a Temporaly Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-156)

3.6.13 How to Set the Focused Route (Method 2)

Overview

- **The functions for the focused route can be applied by setting a destination draft as the focused route.**
  - > 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
  - > 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)

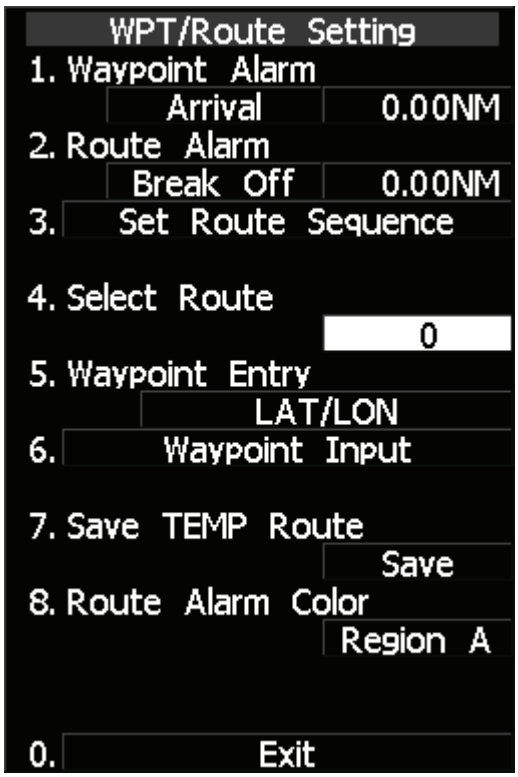
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 3. WPT/Route Setting .

→ Select the 4. Select Route .



2. Input the number of a route draft you wish to use.

Related Topics

- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.14 How to Cancel the Focused Route (Page 3-135)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
- 3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)
- 3.6.25 Example 1: How to Set a Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-155)
- 3.6.26 Example 2: How to Set a Temporaly Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-156)

3.6.14 How to Cancel the Focused Route

Prerequisite

- **Keyboard assignment pattern 2 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

Procedure

1. Press the [->O] key.

→ **Press the [->O] key.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1)

Prerequisite

- **The focused route has been set.**
  > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

⚠ CAUTION

- **The order of the route draft that has not been set as the focused route cannot be changed.**

Procedure

1. Change the keyboard setting to Assignment pattern 1.

3.1.8 Keyboard Assignment Patterns (Page 3-12)

2. Press the [DEST] key.

→ **Input the route draft number.**

→ **Press the [O->] key.**

3. Press the [MULTI] dial.

The focused routes will be arranged in the reverse order.

4. Press the [DEST] key.

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)

3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2)

Prerequisite

- **The focused route has been set.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

⚠ CAUTION

- **The order of the route draft that has not been set as the focused route cannot be changed.**

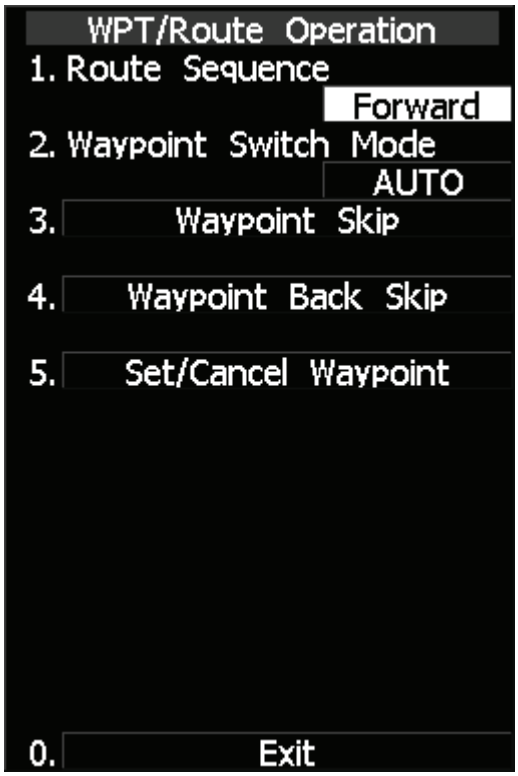
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **4. WPT/Route Operation** **.**

→ **Select the** **1. Route Sequence** **.**



Forward : Arrange the direction of the focused routes in sequence.

Reverse : Arrange the direction of the focused routes in reverse sequence.

Related Topics

- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)

3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1)

Overview

- **The following functions can be applied to the focused route:**
  - > The destination of the focused route will be displayed as ◈ .
  - > The destination direction of the focused route can be set as the upward direction of the screen.
    3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
  - > The azimuth, distance, estimated arrival time to the destination of the focused route can be displayed.
    3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
  - > The destination azimuth vector to the destination of the focused route can be set.
    3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
  - > The alarm mode for arrival at / departure from the destination of the focused route can be set.
    3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)
  - > The alarm mode for arrival at / departure from the focused route can be set.
    3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

Prerequisite

- **The focused route has been set.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

1. Change the keyboard setting to Assignment pattern 1.

3.1.8 Keyboard Assignment Patterns (Page 3-12)

2. Press the [DEST] key.

→ Input the route draft number.

→ Press the [O->] key.

3. Turn the [MULTI] dial.

The focused route will be changed and the changed destination will be displayed as ◈ .

4. Press the [DEST] key.

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
- 3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)
- 3.6.19 How to Aautomatically /Mmanually Change Highlighted Points in the Focused Route (Page 3-144)
- 3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
- 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- 3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
- 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2)

Overview

- **The following functions can be applied to the focused route:**
  - > The focused route will be displayed as ◈ .
  - > The destination direction of the focused route can be set as the upward direction of the screen.
    3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
  - > The azimuth, distance, estimated arrival time to the destination of the focused route can be displayed.
    3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
  - > The destination azimuth vector to the destination of the focused route can be set.
    3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
  - > The alarm mode for arrival at / departure from the destination of the focused route can be set.
    3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)
  - > The alarm mode for arrival at / departure from the focused route can be set.
    3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

Prerequisite

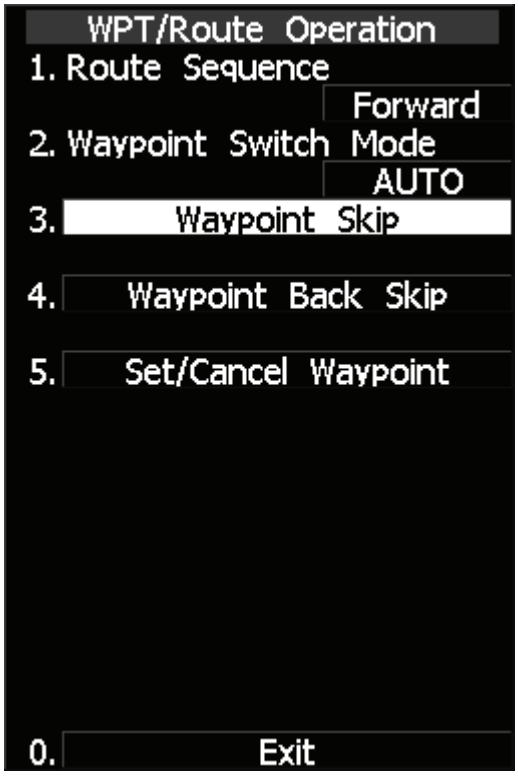
- **The focused route has been set.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **4. WPT/Route Operation** **.**



2. Select the **3. Waypoint Skip** **or** **4. Waypoint Back Skip** **.**

The focused route will be changed and the changed destination will be displayed as ◆ .

Related Topics

- 3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
- 3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
- 3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)
- 3.6.19 How to Aautomatically /Mmanually Change Highlighted Points in the Focused Route (Page 3-144)
- 3.1.10 How to Set the Head-up / Course-up / north-up / Destination-up (only in plotter mode) Display Mode (Page 3-14)
- 3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination (Page 3-149)
- 3.6.8 How to Set the Display Mode of the Destination Azimuth Vector (Page 3-126)
- 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

3.6.19 How to Aautomatically /Mmanually Change Highlighted Points in the Focused Route

Prerequisite

- **The focused route has been set.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- **An arrival-to-destination alarm has been set.**
  - > 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

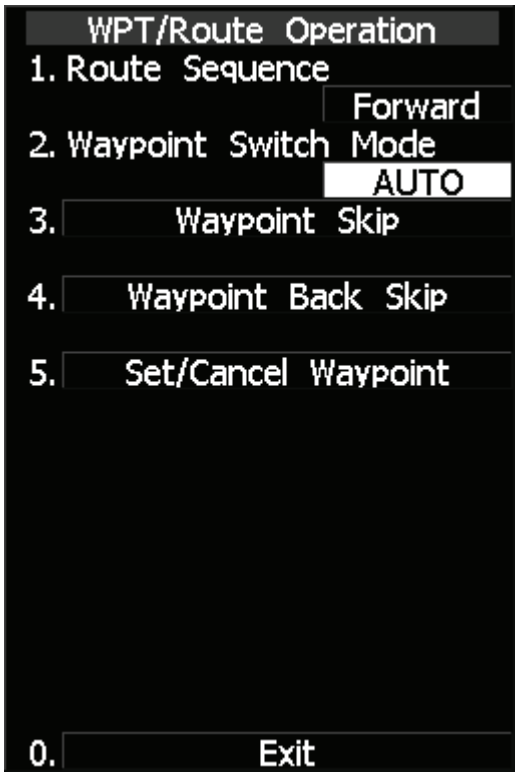
Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** **.**

→ **Select the** **4. WPT/Route Operation** **.**

→ **Select the** **2. Waypoint Switch Mode** **.**



AUTO : The next route will be set as the focused route when the ship enters the arrival alarm area.

Manual : Change the focused route manually.

Related Topics

- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route

Prerequisite

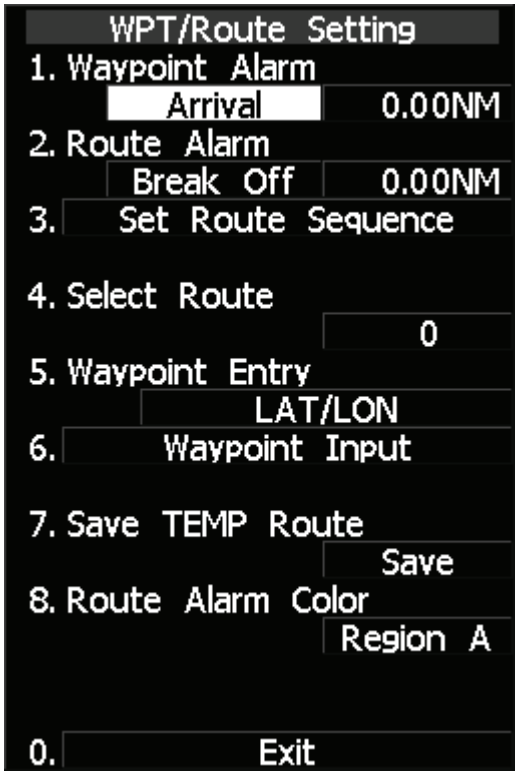
- **A destination must exist.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
  - > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)

Procedure

1. Press the [RADAR MENU] key.

→ **Select the** **9. Plot Menu** .

→ **Select the** **3. WPT/Route Setting** .



- **To set the destination arrival / departure alarm:**

  1. Select the **1 Waypoint Alarm** .

  2. Select:

  Arrival : The alarm will sound when the ship enters the area specified below.

  Break Off : The alarm will sound when the ship leaves the area specified below.

3. Input the distance to the destination.

0.00NM : Do not set an alarm.

Other : Set an alarm for the specified distance.

The alarm range will be surrounded by a dotted red line on the sea chart and the following marks will appear at the top right of the screen to indicate that the alarm has been set.

Arrival :

Departure :

The white part will change to red when the alarm has set off.

- **How to set the alarm mode for arrival at / departure from the focused route.**

1. Select the 2. Route Alarm .

2. Select:

Approach : The alarm will sound when the ship enters the area specified below.

Break Off (Cross Track Error) : The alarm will sound when the ship leaves the area specified below.

3. Input the distance to the focused route.

0.00NM : Do not set an alarm.

Other : Set an alarm for the specified distance.

The alarm range will be surrounded by a dotted red and green line on the sea chart and the following marks will appear at the top right of the screen to indicate that the alarm has been set.

Approach :

XTE :

The white part will change to red when the alarm has set off.

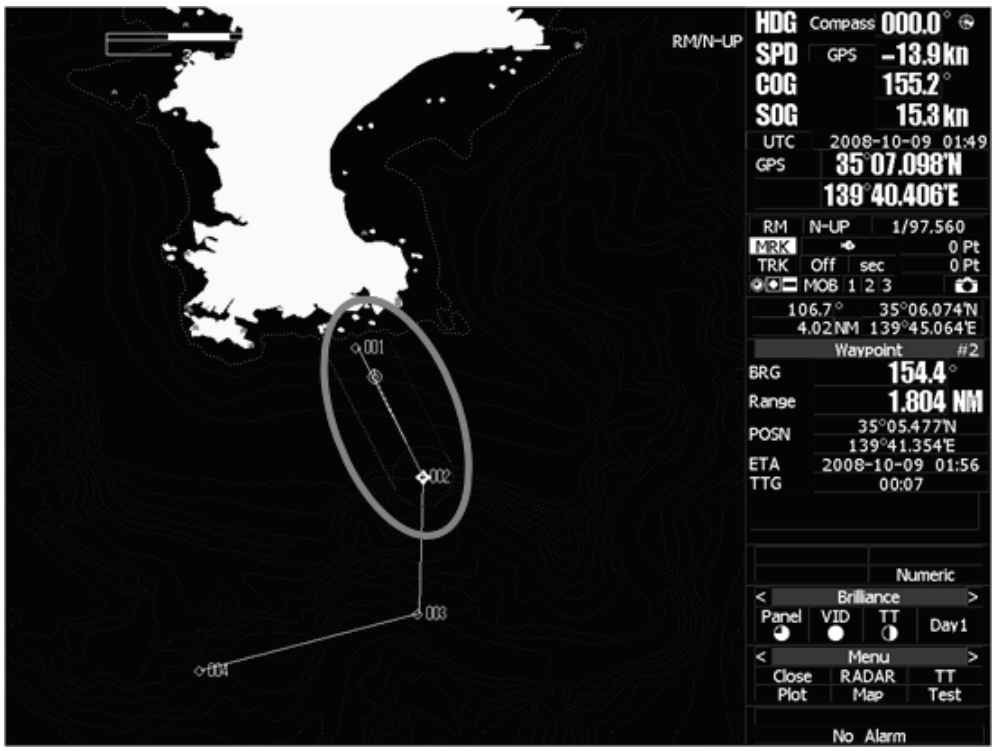
- **How to set the color of alarm.**

  1. Select the 8. Cross Track Limit Line .

  2. Select:

  Region A : The alarm range dotted green line on the ovserver's right , and the alarm range dotted red line on the ovserver's left.

  Region B : The alarm range dotted red line on the ovserver's right , and the alarm range dotted green line on the ovserver's left.



Note

- **The alarm will not sound if "0" is inputted for the distance.**
- **Press the [ALARM ACK] key to stop the alarm.**

Related Topics

- 3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
- 3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)

3.6.21 How to Display the Azimuth, Distance, Estimated Arrival Time to the Destination

Prerequisite

- **A destination must exist.**
  - > 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
  - > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
  - > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)

Procedure

1. Press the [RADAR MENU] key.

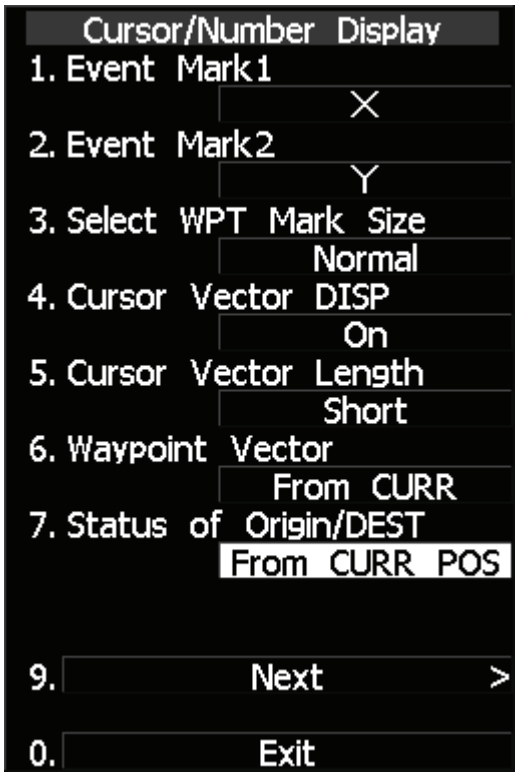
→ Select the 9. Plot Menu .

→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

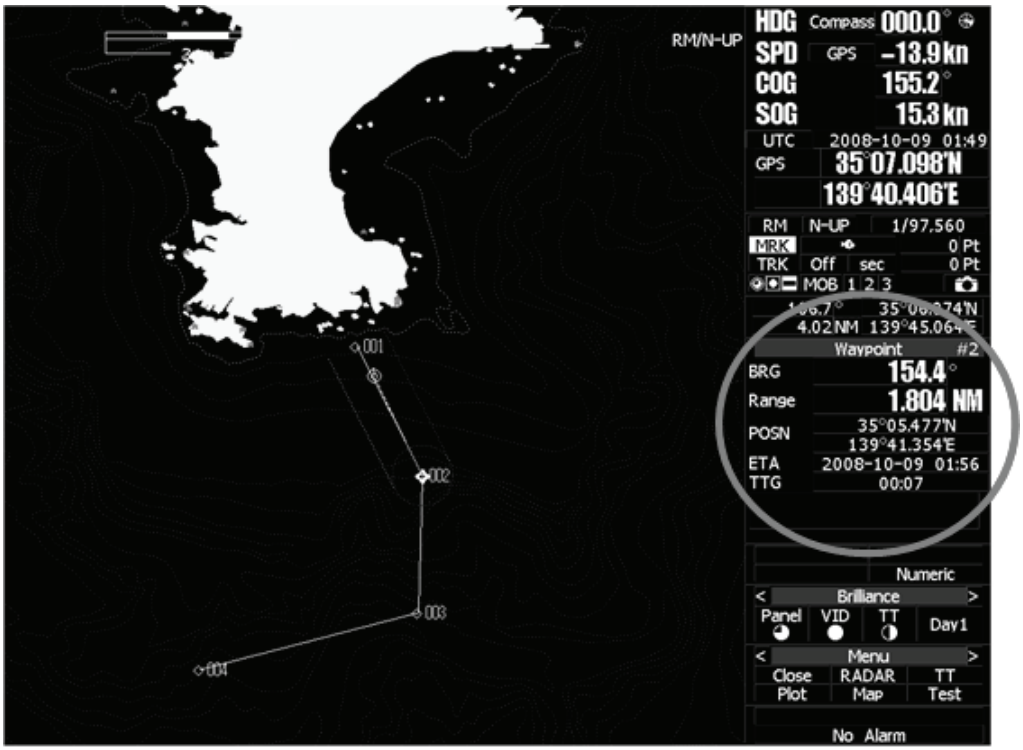
→ Select the 7. Status of Origin/DEST .



2. Select:

From CURR POS : The azimuth, distance, estimated arrival time to the destination will be displayed.

Fix : The azimuth and the distance from the previous destination to the next destination along the route will be displayed.



Related Topics

- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)
- 3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.1.20 How to Obtain Azimuth / Distance Between Two Arbitrary Points (Page 3-28)
- 3.1.19 How to Obtain Azimuth / Distance / Time Necessary to an Arbitrary Point from Own Ship's Position (Page 3-26)

3.6.22 How to Turn On / Off the Display of Route Draft Numbers

Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

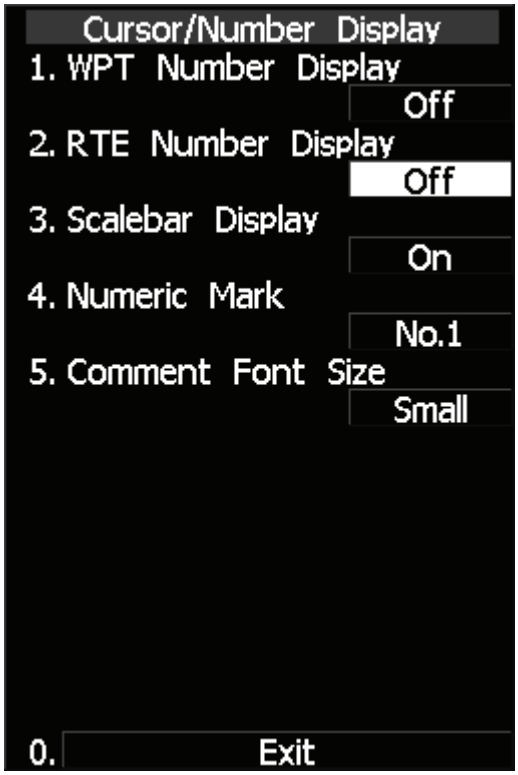
→ Select the 8. Plot Setting .

→ Select the 2. Cursor/Number Display .

→ Select the 9. Next .

→ Select the 9. Next .

→ Select the 2. RTE Number Display .



On : Display route draft numbers.

Off : Do not display route draft numbers.

Related Topics

- 3.6.7 How to set the display of destination draft numbers (Page 3-125)

3.6.23 How to Create / Cancel a Temporary Route

Prerequisite

- **Own ship's position information has been acquired.**
- **A temporary route has not been set as the focused route.**
  > 3.6.14 How to Cancel the Focused Route (Page 3-135)
- **A destination has not been set.**
  > 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- **Keyboard assignment pattern 3 applied.**
  > 3.1.8 Keyboard Assignment Patterns (Page 3-12)

⚠ CAUTION

- **A temporary route will be set to the focused route as a route draft of Route Draft 11.**
  > 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

Procedure

- **How to set:**

  1. Move the cursor to the origin.
  → Press the [O->] key.

  2. Move the cursor to the relay point.
  → Press the [O->] key. (repeat this step for the number of relay points).

  3. Move the cursor to the end-point.
  → Press the [O->] key.
  → Press the [->O] key.

- **How to cancel:**

  1. Press the [->O] key.

Note

- **Only one temporary route can be set.**

Related Topics

- 3.1.8 Keyboard Assignment Patterns (Page 3-12)
- 3.6.24 How to Save a Temporary Route (Page 3-154)
- 3.6.14 How to Cancel the Focused Route (Page 3-135)
- 3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)
- 3.6.4 How to Set / Cancel a Destination Draft as a Destination (Page 3-119)
- 3.6.25 Example 1: How to Set a Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-155)
- 3.6.26 Example 2: How to Set a Temporaly Route and then Sound an Alarm when the Ship Gets Close to the Destination (Page 3-156)

3.6.24 How to Save a Temporary Route

⚠ CAUTION
- **Deleted memory cannot be restored.**

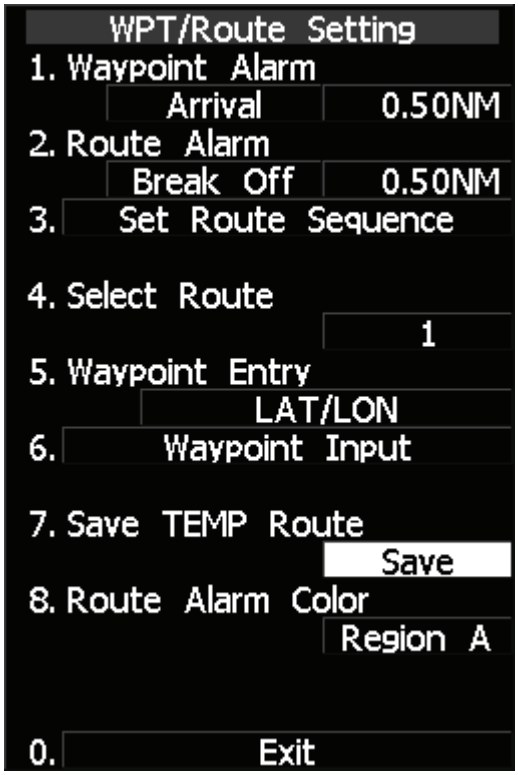
Procedure

1. Press the [RADAR MENU] key.

→ Select the 9. Plot Menu .

→ Select the 3. WPT/Route Setting .

→ Select the 7. Save TEMP Route .



2. Select:

Save : The temporary route will not be lost after restarting the system.

Delete : The temporary route will be lost when the system is restarted.

Related Topics

- 3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)

3.6.25 Example 1: How to Set a Route and then Sound an Alarm when the Ship Gets Close to the Destination

Overview

- **It is necessary to create a route draft and set it to the focused route in order to set a route. In order to create a route draft, a destination draft is necessary.**

Procedure

1. Create a destination draft.

3.6.3 Waypoint Input Manager How to Add a Comment to a Waypoint How to Check Destination Draft Numbers (Page 3-116)
3.6.1 How to Create a Destination Draft (Page 3-114)

2. Create a route draft.

3.6.9 How to Create a Route Draft (Method 1) (Page 3-128)
3.6.10 How to Create a Route Draft (Method 2) (Page 3-129)

3. Select a route draft to use as the focused route.

3.6.12 How to Set the Focused Route (Method 1) (Page 3-132)
3.6.13 How to Set the Focused Route (Method 2) (Page 3-133)

4. To reverse the order of routes:

3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)

5. When the ship is not at its origin of the focused route because it is now at the middle of a route:

3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)

6. Set a destination arrival alarm.

3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

3.6.26 Example 2: How to Set a Temporaly Route and then Sound an Alarm when the Ship Gets Close to the Destination

Overview

- **By using a temporary route, it is possible to skip the first 3 steps described in Example 1.**

Procedure

1. Create a temporary route.

When complete, the created route will be automatically set as the focused route.

3.6.23 How to Create / Cancel a Temporary Route (Page 3-152)

2. To reverse the order of routes:

3.6.15 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 1) (Page 3-136)
3.6.16 How to Change the Order of the Focused Route: in Sequence or in Reverse Sequence (Method 2) (Page 3-137)

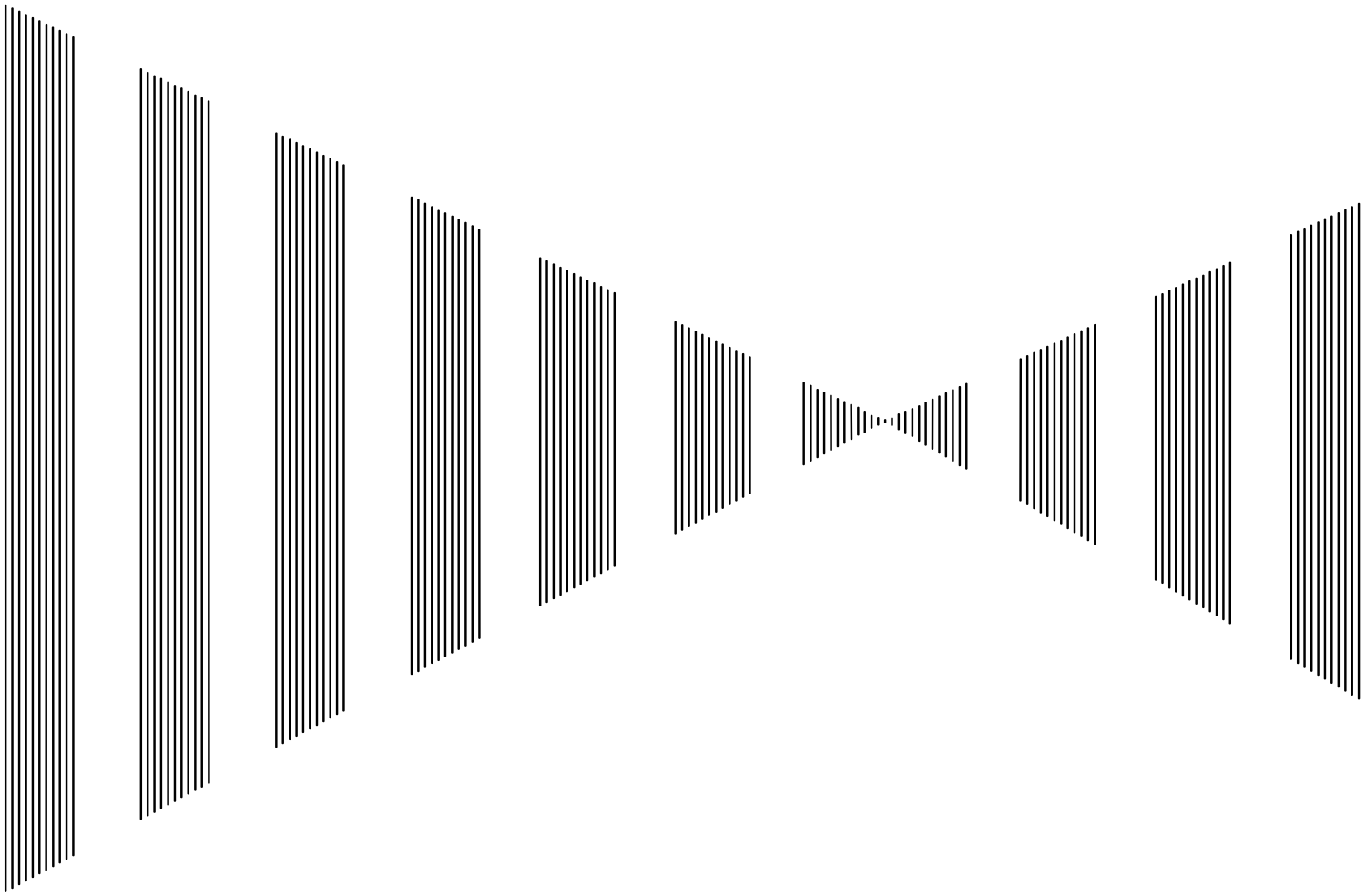
3. When the ship is not at its origin of the focused route because it is now at the middle of a route:

3.6.17 How to Change the Focused Route (focused route skip / back skip) (Method 1) (Page 3-139)
3.6.18 How to Change the Focused Route (focused route skip / back skip) (Method 2) (Page 3-141)

4. Set a destination arrival alarm.

3.6.20 How to Set the Alarm Mode for Arrival at / Departure from the Destination / the Focused Route (Page 3-146)

SECTION 4
MAINTENANCE



⚠ DANGER

Never conduct inspection or repair work of the plotter components.
Inspection or repair work by uncertified personnel may result in fire hazard or electrocution.
For inspection and repair work of the plotter components, consult with our branch office, branch shop, sales office, or our distributor in your district.

4.1 DAILY MAINTENANCE

Equipment lifespan largely depends on proper conduction of maintenance. Please conduct inspection regularly in order to maintain optimal operation of the equipment. This will enable early detection as well as prevention of equipment failure.

4.1.1 Cleaning

Wipe the plotter immediately if seawater or freshwater gets onto the equipment. Failure to comply may result in failure or malfunction.
To clean the plotter, apply neutral detergent to a piece of soft cloth and use it to wipe the plotter softly. Make sure that the detergent does not drip from the cloth.

4.1.2 Lid for the Card Slots

This plotter has two card slots: one for the shoreline ROM card and the other one for the memory card.
Exposure of these card slots to seawater or dust may result in incorrect card reading and writing operations.
Therefore, make sure to tightly attach the lid to the slots.

4.1.3 Shoreline ROM Card and Memory Card

Delicate electronic components are contained in the shoreline ROM card and memory card.
Do not allow them to get wet. Failure to comply may result in damage to the cards.
Do not drop them from a high place. Failure to comply may result in damage to the cards.
Do not step on them. Failure to comply may result in damage to the cards.

Do not allow the connector to get wet or to get dirty. Failure to comply may result in incorrect card reading and writing operations.

4.1.4 Life of the Internal Battery

This plotter uses its internal memory to store data such as tracks, event marks, marks, destinations, and various settings. The stored data will be lost when the internal battery runs out. The life of the battery is approximately 5 years after production of the equipment. Please have the battery checked or replaced at our distributor or sales office in your district when the battery life is expected to run out soon.
We strongly recommend that important data be backed up with the memory card.

4.2 REGULAR INSPECTION

We recommend annual inspections be conducted for plotter components, connections to the power source, and connections to other devices.

4.3 TROUBLESHOOTING

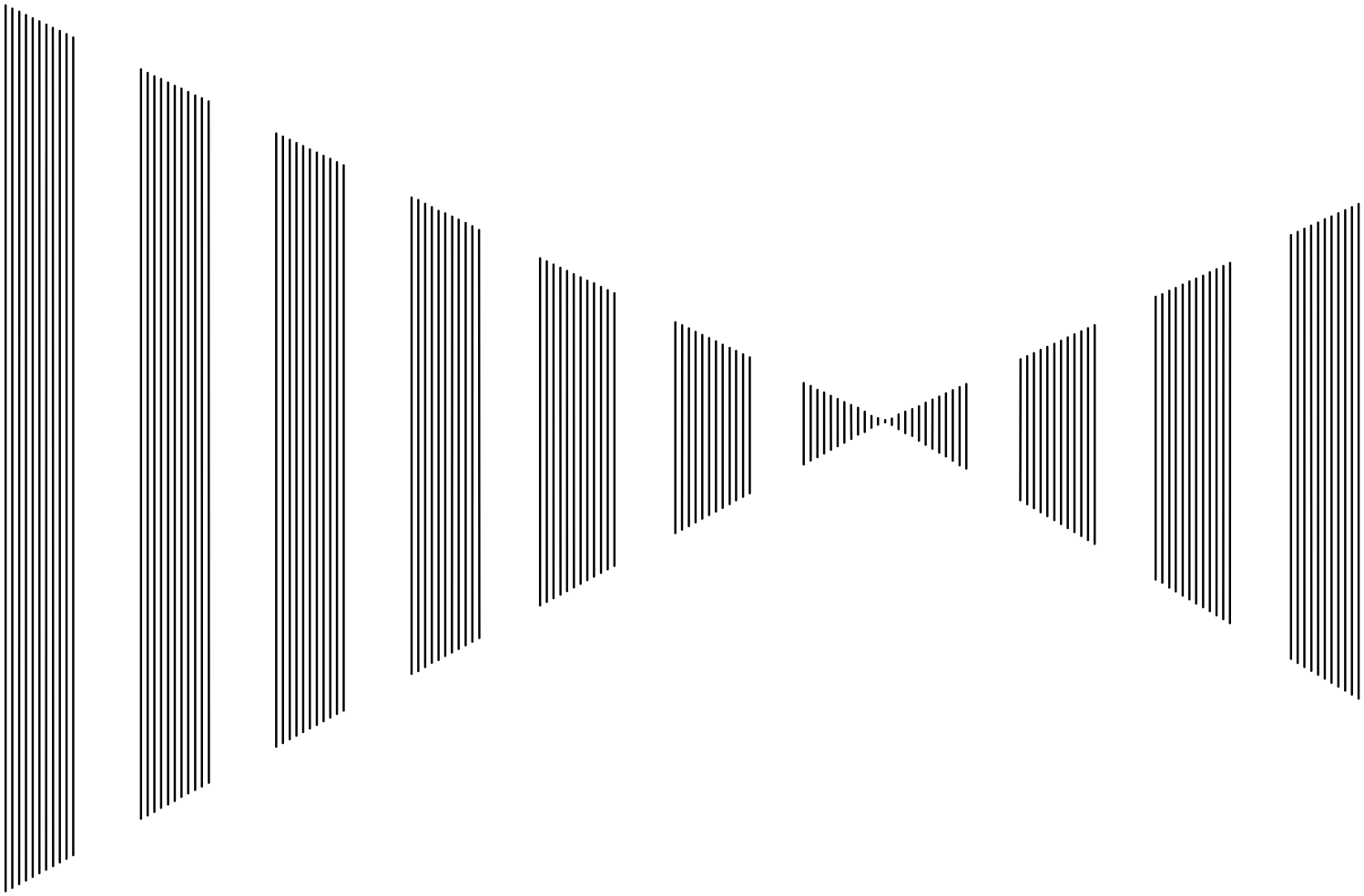
When the plotter does not operate properly, check the plotter by referring to the table below. The table introduces possible causes and solutions for each problem, so follow these instructions to conduct checks.

If problems persist, or if you find problems not described in the table, consult with our branch office, branch shop, sales office, or our distributor in your district.

Symptom	Possible cause and solution
The power cannot be turned on or off.	Possible cause : The ship's power has not been turned on. Solution : Turn on the ship's power.
	Possible cause :The ship power cable or the DC power cable is not connected to or is disconnected from the AC power rectifier. Solution : Request the dealer to carry out necessary engineering work.
	Possible cause :The AC power rectifier has failed. Solution : Request the distributor to carry out necessary repair work.
	Possible cause :The processor has failed. Solution : Request the distributor to carry out necessary repair work.
	Possible cause :The DC power cable is not connected to the plotter. Solution : Connect the DC power cable to the plotter.
The screen does not show any images or image quality is low.	Possible cause :The brightness dial has only been turned a small amount. Solution : Turn the brightness knob until it stops.
	Possible cause :The screen is exposed to direct sunlight. Solution : Install the plotter in a location where it will not be exposed to direct sunlight.
	Possible cause :The indicator has failed. Solution : Request the distributor to carry out necessary repair work.
Keys have no effect Possible cause:	Possible cause : If a "beep, beep, beep" sound is heard from the key board, then the key operation is invalid. Solution : The key operation is invalid.
	Possible cause : If no beep sound is heard from the key board, the key board or the processor may have failed. Solution : Request the distributor to carry out necessary repair work.

Symptom	Possible cause and solution
Data cannot be read from or written onto the memory card	Possible cause : Attempts are made to write data onto the shoreline ROM card. Solution : Since data cannot be written onto the shoreline ROM card, write data into the memory card.
	Possible cause : The memory card has not been formatted. Solution : Format the memory card.
	Possible cause : The memory card is not fully inserted into the slot. Solution : Remove the card once, and then try inserting it again.
	Possible cause : The memory card is defective. Solution : Replace the memory card.
	Possible cause : The processor has failed. Solution : Request the distributor to carry out necessary repair work.
Colors on the display do not change.	Possible cause : Proper setting has not been made. Solution : Try to set the colors again.
	Possible cause : The key board or the processor has failed. Solution : Request the distributor to carry out necessary repair work.
Brightness of the key board cannot be switched.	Possible cause : Proper setting has not been made. Solution : Try to set the brightness again.
	Possible cause : The key board or the processor has failed. Solution : Request the distributor to carry out necessary repair work.
The cursor does not move properly even though the trackball moves properly.	Possible cause : The trackball slips and thus cannot operate properly. Solution : Request the distributor to carry out necessary repair work.
	Possible cause : The trackball has failed. Solution : Request the distributor to carry out necessary repair work.
The cursor does not move even though the trackball moves properly.	Possible cause : The trackball has failed. Solution : Request the distributor to carry out necessary repair work.
Accuracy of the position fixing function has decreased.	Possible cause : The GPS antenna has failed. Solution : Request the distributor to carry out necessary repair work.

SECTION 5
AFTER-SALES SERVICE



5.1 WHEN REQUESTING REPAIR WORK

5.1.1 Keeping Period of Maintenance Parts

Keeping period of maintenance parts is ten years from the production is discontinued.

5.1.2 When you Request for Repair

When you think that the plotter may have a problem, read "4.3 Troubleshooting" thoroughly and check the plotter.
If the problem persists, then stop using the plotter and consult with our branch office, branch shop, sales office, or our distributor in your district.

- **Repair within the Warranty Period**
  If any failure occurs in the product during its normal operation in accordance with the instruction manual, the dealer or JRC will repair free of charge. In case that any failure is caused due to misuse, faulty operation, negligence or force major such as natural disaster and fire, the product will be repaired with charges.
- **Repair after the Warranty Period**
  If any defective function of the product is recoverable by repair, the repair of it will be made at your own charge upon your request.
- **Necessary Information for Repair**

  Product name, model name, date of manufacture, and serial number.

  Detailed description of the problem.

  Name of the company or organization, address, and phone number.

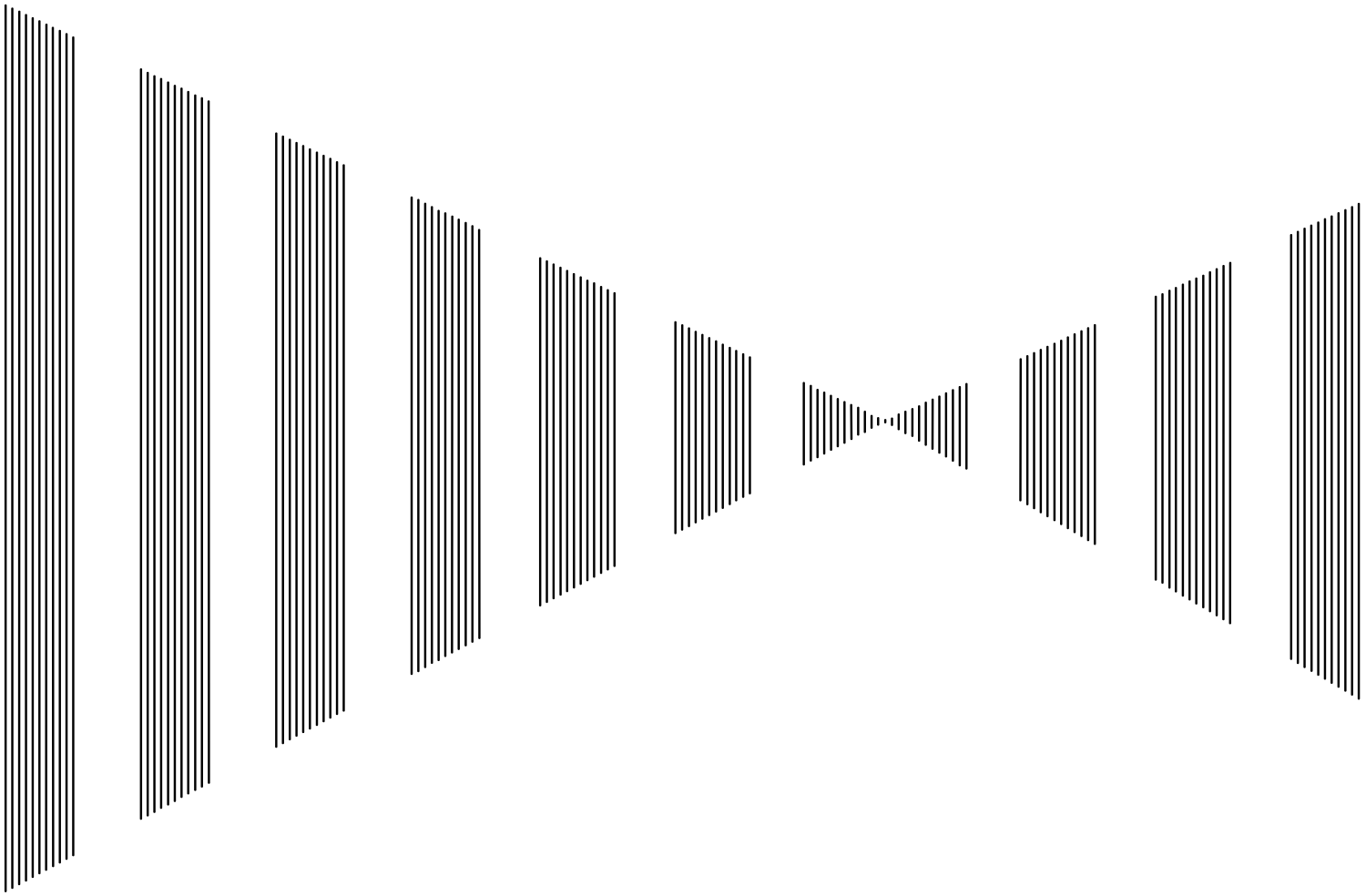
5.2 RECOMMENDATION OF OVERHAUL

Although it depends on how plotter is used, its performance may become lower as the same parts are used over a long period of time. We recommend an overhaul be conducted in addition to regular maintenance.
For details on overhauls, consult with our branch office, branch shop, sales office, or our distributor in your district.

An overhaul is a paid service.

- **If you need further information on after-sales services, contact our branch office, branch shop, sales office, or our distributor in your district.**

SECTION 6
DISPOSAL



6.1 DISPOSAL OF THE UNIT

When disposing of this unit, be sure to follow the local laws and regulations for the place of disposal.

6.2 HANDLING OF USED LITHIUM BATTERIES

⚠ WARNING

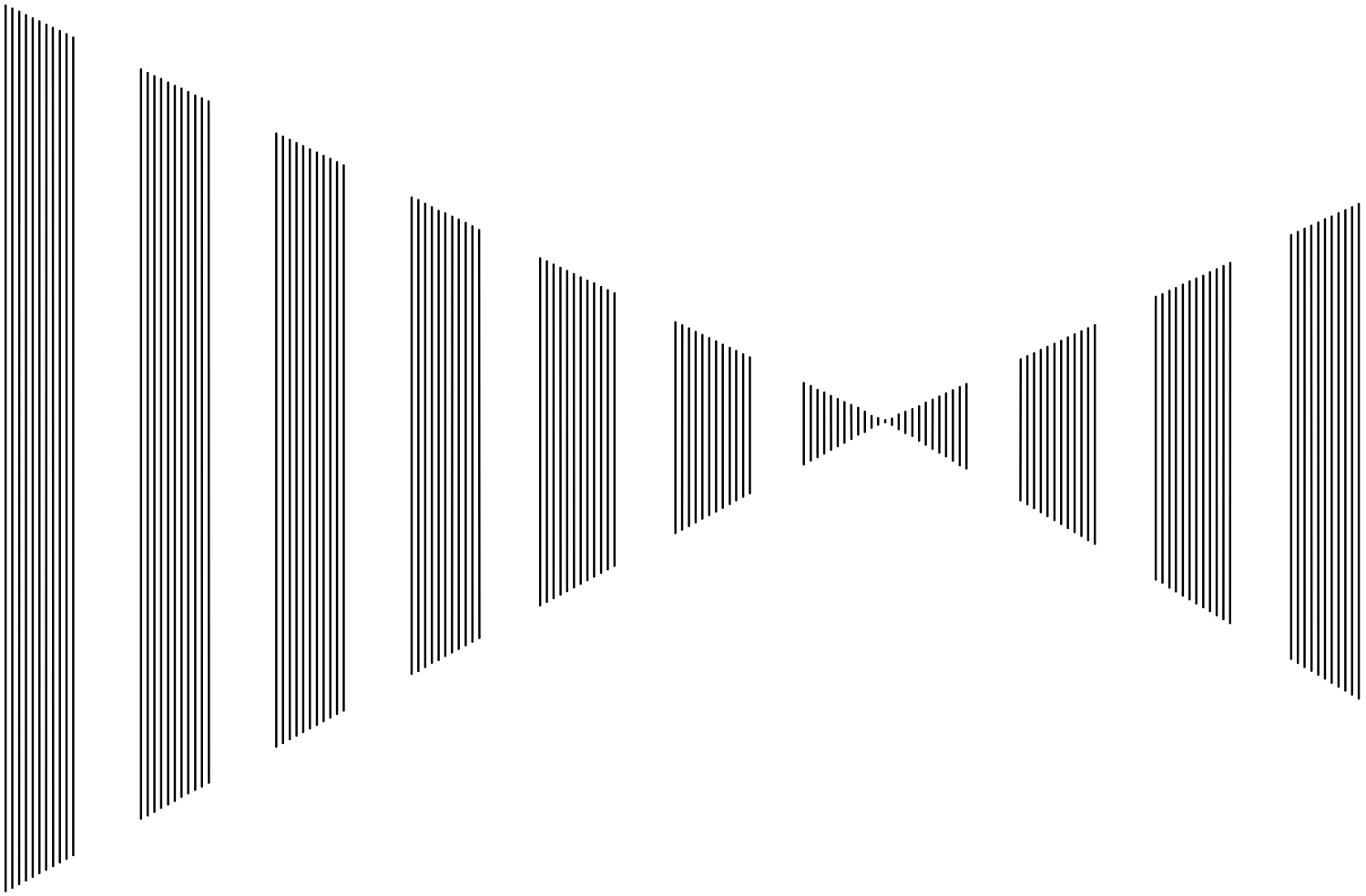
When disposing of used lithium batteries, be sure to insulate the batteries by taping the + and − terminals.
Otherwise, heat generation, explosion or a fire may occur.

In this unit, Lithium batteries are used for the following parts:
Radar Processing circuit (CDC-1350): BT1 (CR2032)

- **Do not store used lithium batteries. Dispose of them in accordance with regulations of local government.**

- **When disposing of used lithium batteries be sure to insulate the batteries by taping the + and - terminals. For disposal of batteries, be sure to follow the local laws and regulations.**
  For detail, consult with the dealer you purchased the product our business office, or local government.

SECTION 7
SPECIFICATIONS



7.1 PLOTTER FUNCTION

(1)Plotter function (Synthesis mode)

Projection : Mercator projection (Latitude 70 degree or less.)

Scale : Synchronize range scale

Own ship track : 7 colors.
- Interval of save : 3/5/10/30 sec, 1/3/5/10/30/60 min or every 0.1/0.2/0.3/0.5/1/3/5/10 NM and Off
- Capacity of own ship track : 7,000 point

Cursor mark : 7 colors
- Capacity of cursor mark : 20,000 point
- Variety of cursor Mark : 19

Event mark : 7 colors
- Capacity of cursor mark : Include in cursor mark
- Variety of cursor Mark : 3 types (Availability of switching between two types, and selection from 8 shapes)
  Availability of an external event mark (1 color and 1 type)

Line : 7 colors
- Capacity of line : Include in cursor mark
- Variety of line : Solid line, broken line, alternate long and short dash line

Coast line data : Coast line ROM card (Option)(ERC, JRC, C-Map NT+)
The contours of 9 selected depths can be displayed, and 7-color display is available.
Selected one depth contour can be displayed.

External memory : Memory card (Option)

Waypoint and route : Waypoint can be set up to 99 point.
- Information of waypoint : Azimuth, distance and the time to required destination.
- Setting of sea route : 10 sea routes. (10 destination for one route can be set.)
- Alarm of route : Waypoint arrival / break off, Route arrival / break off

Position correction : Latitude / Longitude correction
Radar video synchronize range scale coast line by manual.(Synthesis mode)

(2)Plotter function (Plotter mode)

Projection : Mercator projection (Latitude 85 degree or less.)

Scale : Sequential switching or 10-step switching from 1/1,000 to 1/10,000 (Presetting possible)

Own ship track : 7 colors.
- Interval of save : 3/5/10/30 sec, 1/3/5/10/30/60 min or every 0.1/0.2/0.3/0.5/1/3/5/10 NM and Off
- Capacity of own ship track : 7,000 point

Cursor mark : 7 colors
- Capacity of cursor mark : 20,000 point
- Variety of cursor Mark : 19

Event mark : 7 colors
- Capacity of cursor mark : Include in cursor mark
- Variety of cursor Mark : 3 types (Availability of switching between two types, and selection from 8 shapes)
  Availability of an external event mark (1 color and 1 type)

Line : 7 colors
- Capacity of line : Include in cursor mark
- Variety of line : Solid line, broken line, alternate long and short dash line

Coast line data : Coast line ROM card (Option)(ERC, JRC, C-Map NT+)
The contours of 9 selected depths can be displayed, and 7-color display is available.
Selected one depth contour can be displayed.

External memory : Memory card (Option)

Waypoint and route : Waypoint can be set up to 99 point.
- Information of waypoint : Azimuth, distance and the time to required destination.
- Setting of sea route : 10 sea routes. (10 destination for one route can be set.)
- Alarm of route : Waypoint arrival / break off, Route arrival / break off

Position correction : Latitude / Longitude correction
Radar video synchronize range scale coast line by manual.(Synthesis mode)

アスベストは使用しておりません
Not use the asbestos

CODE No.7ZPRD0716

For further information,contact:

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