

The purpose of this guide is to provide the basic operation for this equipment. For more detailed information, see the Operator's manual.

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FURUNO ELECTRIC CO., LTD.

www.furuno.co.jp



Operating Controls

Scrolling the display (pad)
 Scroll the radar, chart plotter display in the direction of the arrow or diagonal pressed.

Centering own ship
 Momentary push

3D display on/off
 Long push to get 3D display
 Long push again to get 2D display

Power on/off
 ON: Momentary push
 OFF: Long push (3 sec)

Adjusting brilliance*, panel dimmer
 * For DCU12
 Push
 Rotate to adjust; push to confirm.

Showing the soft controls
 Push
 For RotoKey operation, see page 3.

Canceling entry
 Push to cancel last entry.

Showing pop-up menu
 Place cursor with
 Push

Entering a point
 Place cursor with Cursorpad.
 Momentary push
 See page 9 for details.

Creating a route
 Place cursor with Cursorpad.
 Long push
 Use Cursorpad and left-click button (⊖) to create a route. See page 10 for details.

Data boxes on/off
 Momentary push

Adjusting audio volume
 Long push
 Adjust.
 Confirm.

Adjusting gain, sea and rain clutters
 Momentary push
 Select Gain, Sea or Rain.
 Select HF or LF.

TX, STBY
 Long push
 Toggle TX, STBY in radar.
 Adjust.
 Confirm.

Switching active display
 Rotate to select display; push to confirm. (For details, see page 6.)

Menu operation
 Choose menu.
 Confirm.

Saving point at current position
 Momentary push
 Point

Marking MOB position
 Long push
 MOB mark

Showing points list
 Long push

Moving the cursor
 Cursor moves in direction of arrow or diagonal pushed.

Finding object information

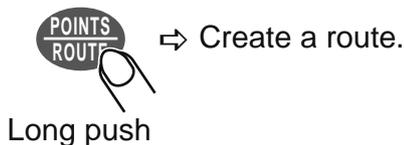
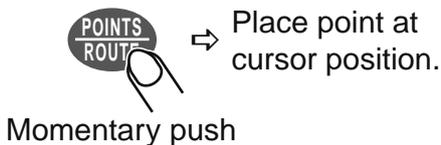
Go to cursor location
 Momentary push
 Long push

Selecting range
 OUT: Increase range
 IN: Decrease range

How to Use the Controls

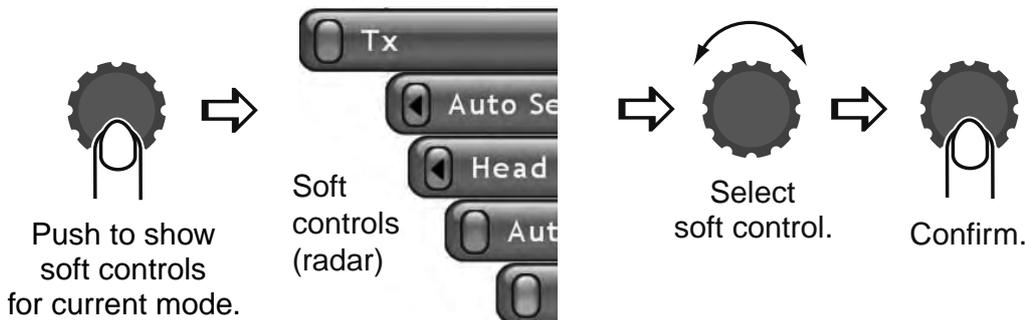
Keys

Discrete keys provide the function(s) labeled on their keys. A key with dual functions; for example , has a line separating the two functions. Access the top function with a momentary push, the bottom function with a long push (about three seconds).



RotoKey and soft controls

- Access by rotating or pushing .
- They change depending on mode or function in use.
- Long push  to show full set of soft controls for current mode.



The cursor

The cursor mainly functions to

- measure the range and bearing to a location on the radar and chart plotter
- select position for a point and point route

It takes on one of two configurations depending on its state.

 : Inactive

 : Active (in motion)

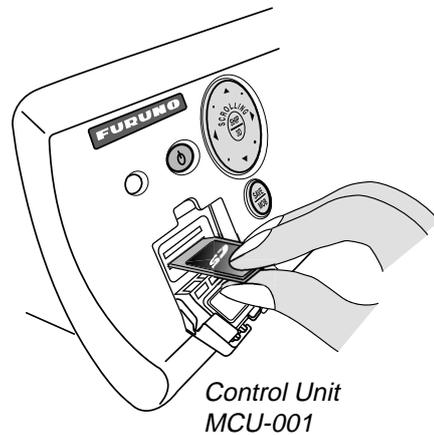
Using the SD Cards

Care and handling of SD cards

- Handle SD cards carefully. Careless handling can damage the card and destroy its contents.
- Ensure the lid is closed at all times.
- Remove the card with only your fingers. Do not use metallic instruments (such as tweezers, etc.).
- Do not remove a card during either reading or writing to the card.

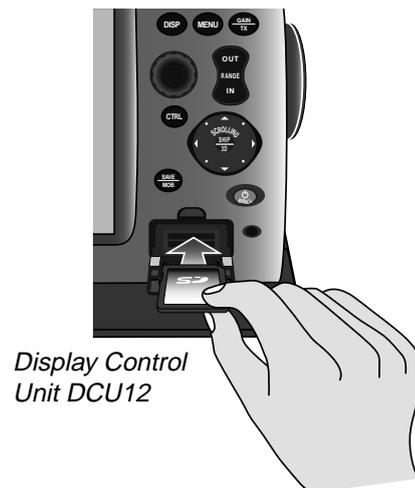
Inserting an SD card

1. Pull the tab on the card drive lid to open the card drive.
2. Insert the SD card in either card drive as shown right, with the label up. It should go in easily. If it is doesn't, do not try to force it.
3. Push the card until it is in place and then close the lid.



Removing an SD card

1. Pull the tab on the card drive lid to open the card drive.
2. Push in the card until it pops out.
3. Remove the card with your fingers and then close the lid.



General

Selecting a range



- Press **RANGE OUT** to increase the range.
- Press **RANGE IN** to decrease the range.

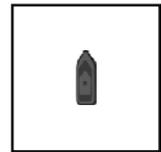
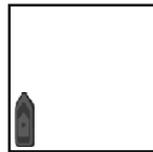
Scrolling the chart, radar picture



Press arrow or diagonal to scroll chart, radar picture.

Returning own ship icon to screen center

The own ship icon marks your vessel's position. If you can't find it on the chart, or you wish to re-center it on the radar or chart plotter, push the **SHIP/3D** button to return it to the screen center.



Momentary push

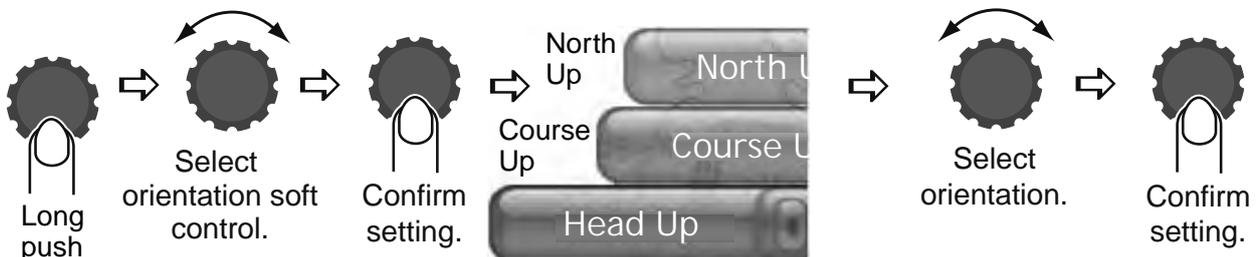
Chart, radar picture orientation

Chart, radar picture orientation is available in Head-up, North-up and Course-up.

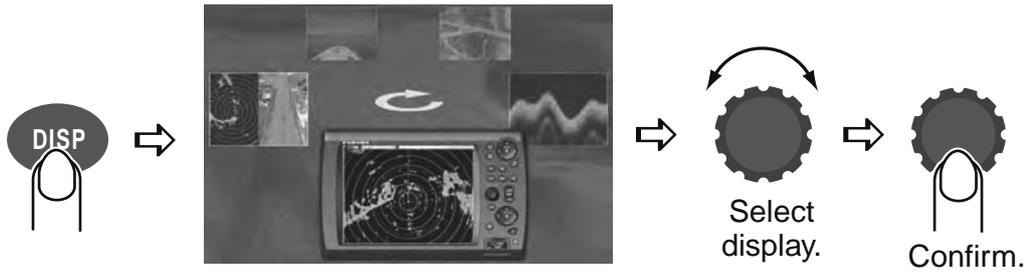
Head-up: Chart with current compass heading upward.

North-up: Orientation fixed with true north upward.

Course-up: Destination is always at the screen top.



Selecting a display



Presetting the display selection screen

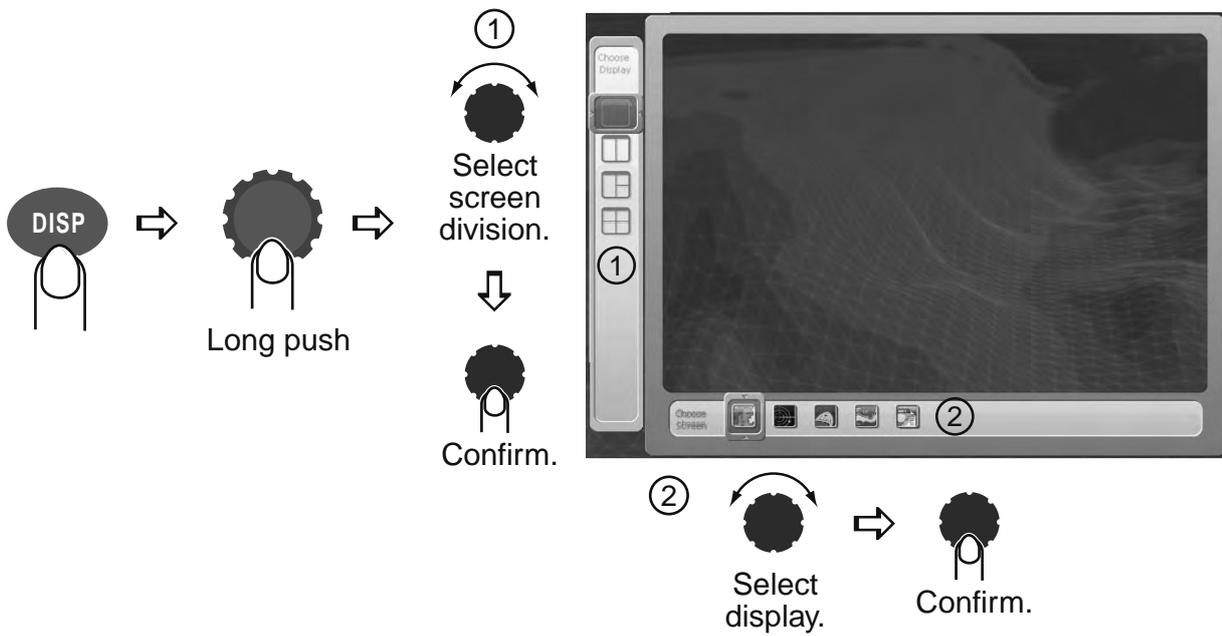
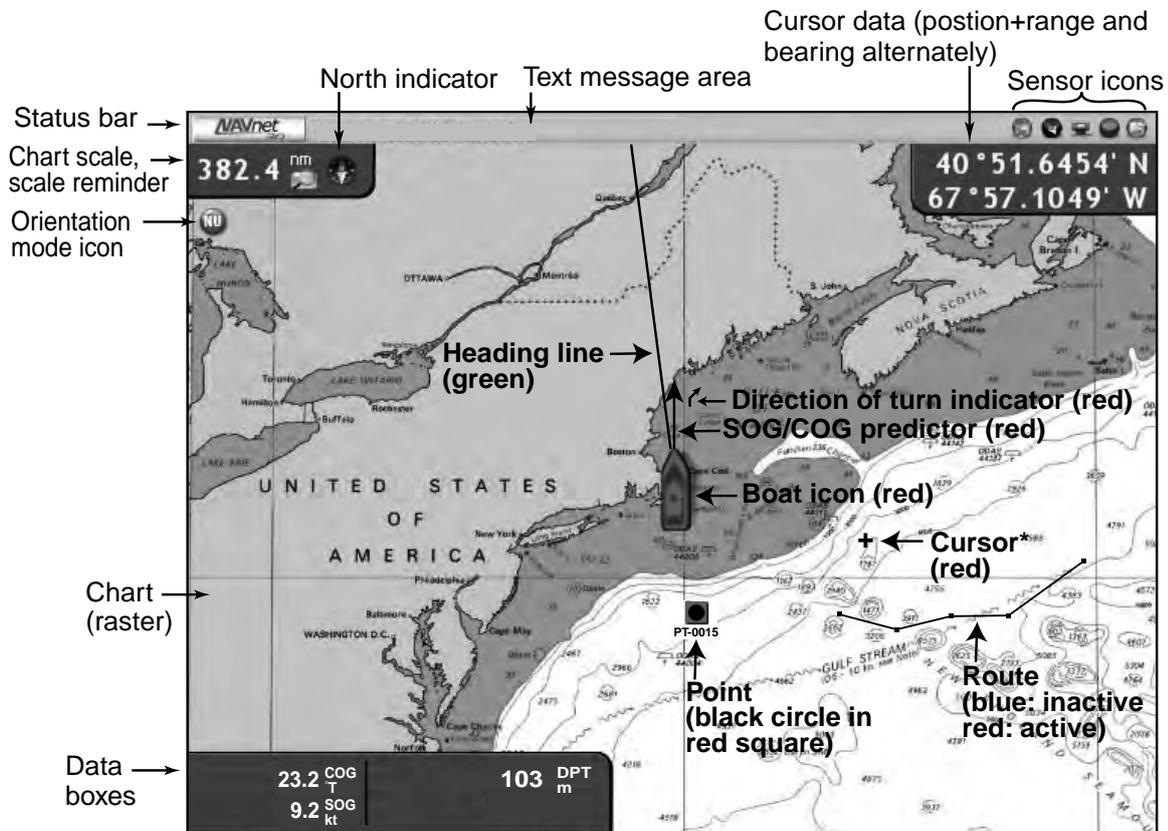


Chart Plotter

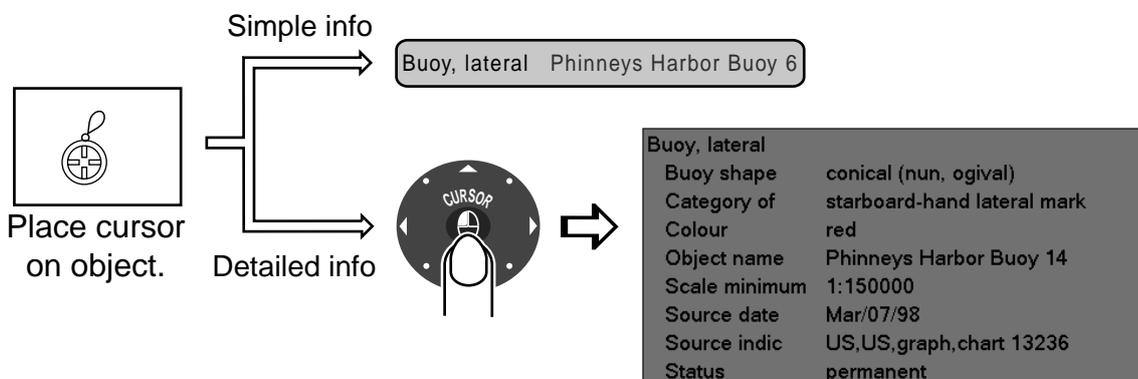
Chart plotter display



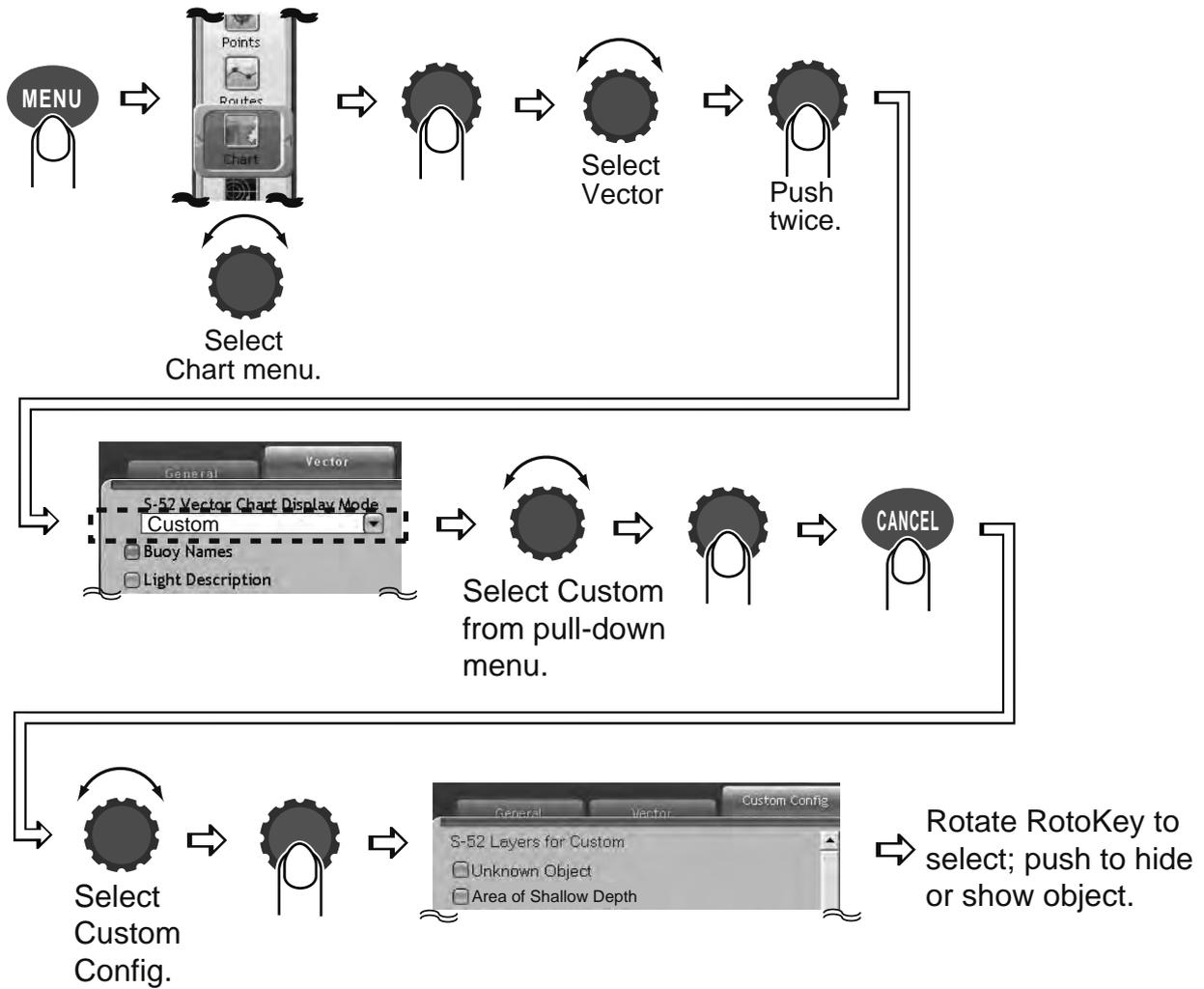
* Inactive cursor. Active cursor looks like this .

Cartographic features

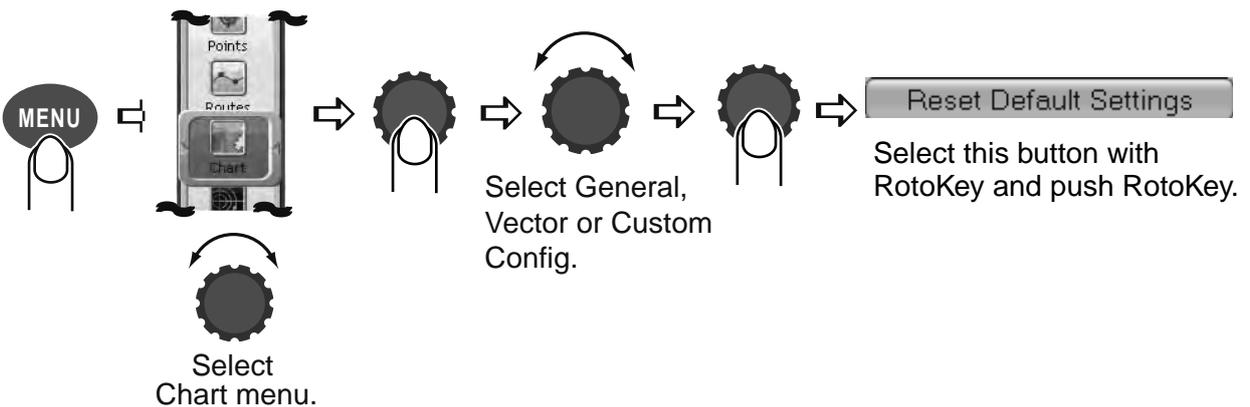
Finding information about a cartographic object



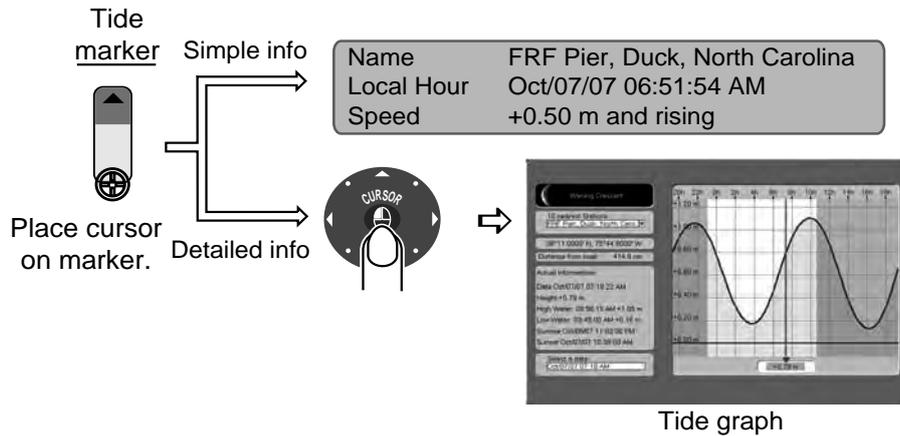
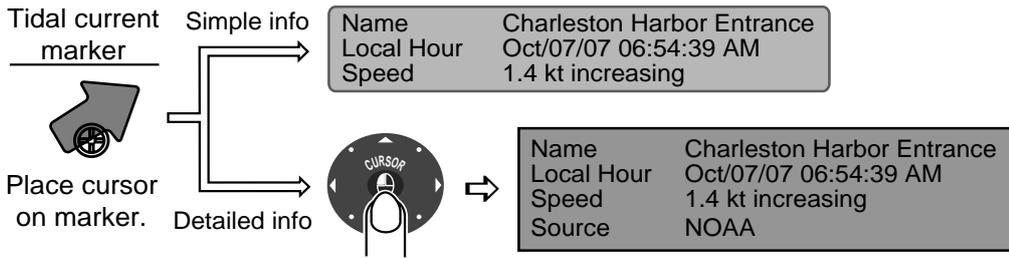
Hiding/Showing cartographic features, text information



Restoring default cartographic features



Showing tidal current and tide information

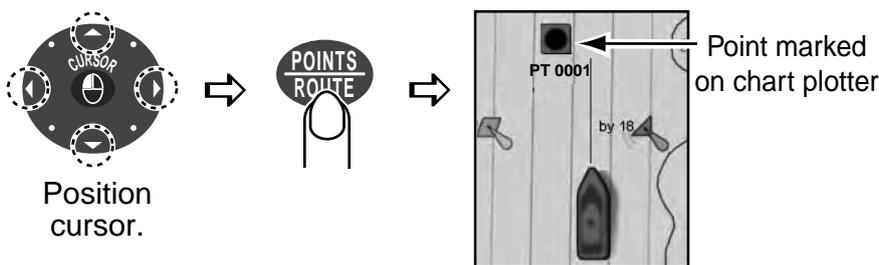


How to use points

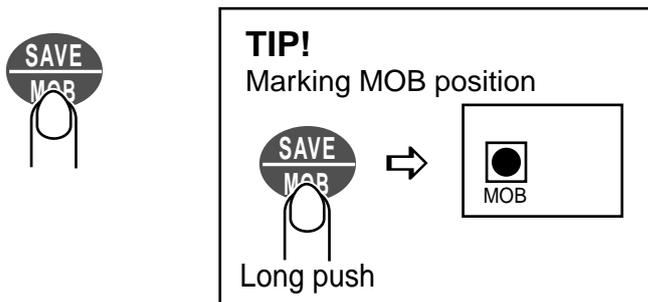
A point marks a geographical position on the chart plotter. You can mark points at the cursor position, ship's position, or at a specified location. Points are marked on the screen with the waypoint symbols (●) and waypoint numbers. Points are stored in the points list, where you can edit, delete or group waypoints as desired.

Placing a point

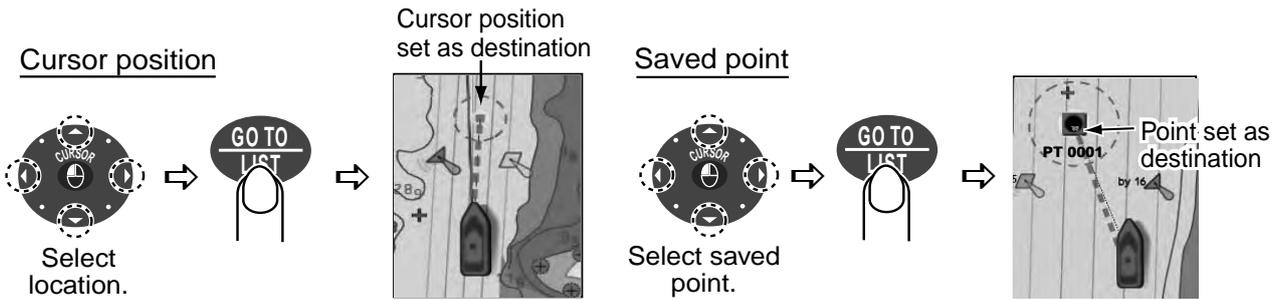
At cursor location



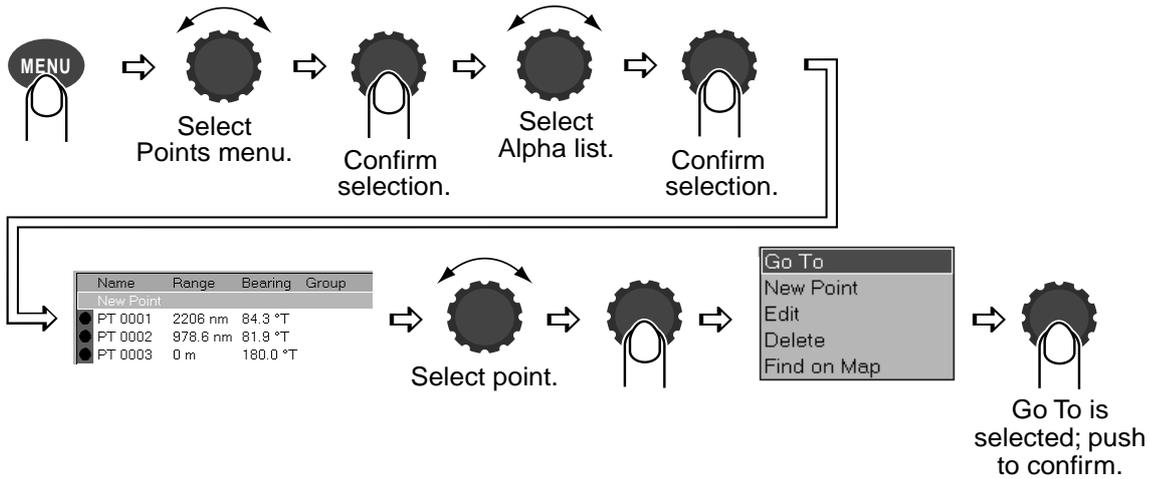
At own ship's position



Going to a point

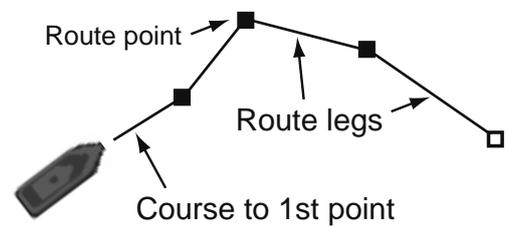


Using the points list

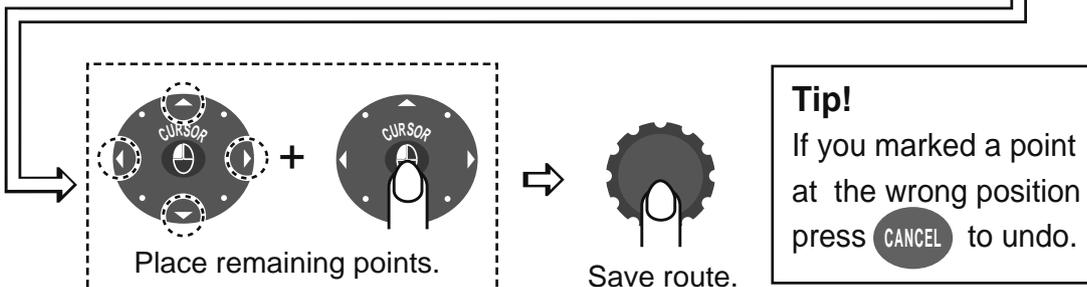
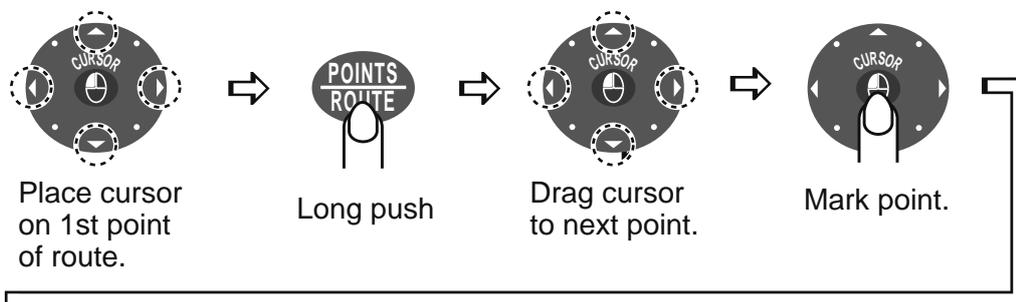


Routes

A route consists of a series of points leading to ultimate destination. Routes are stored in the Routes list, where you can edit or delete routes as necessary.

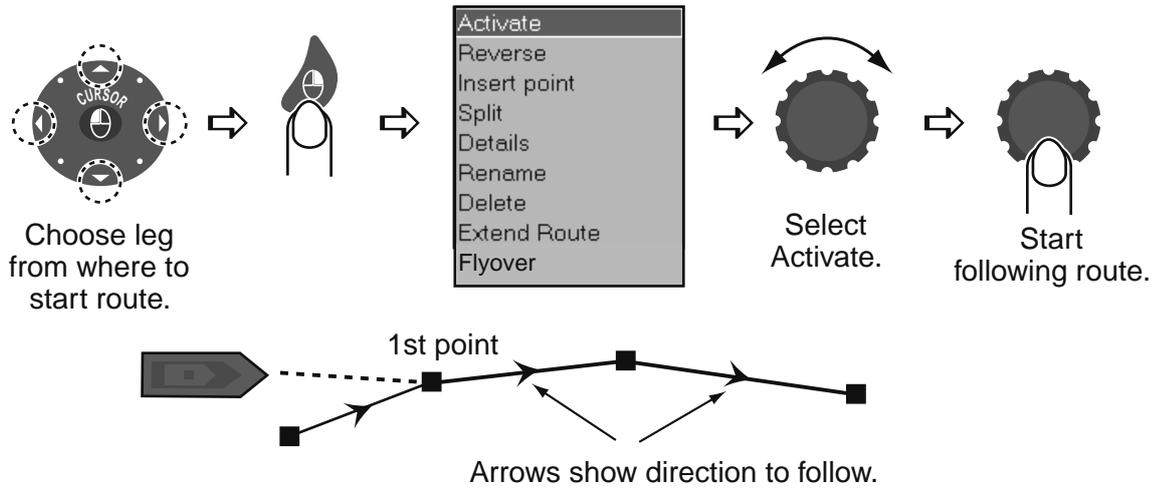


Creating a route

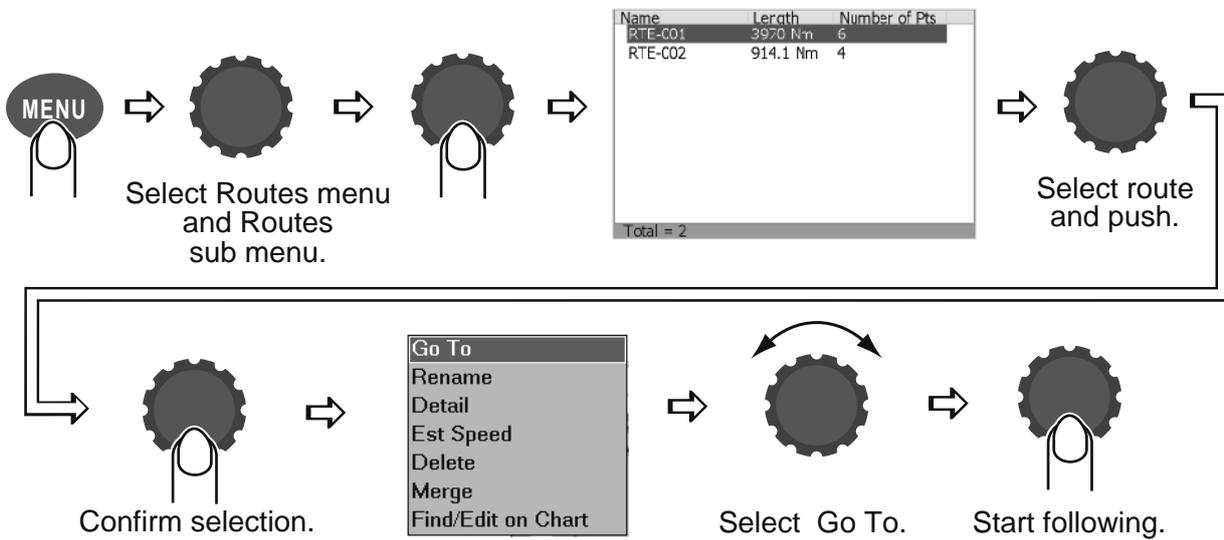


Following a route

On-screen route

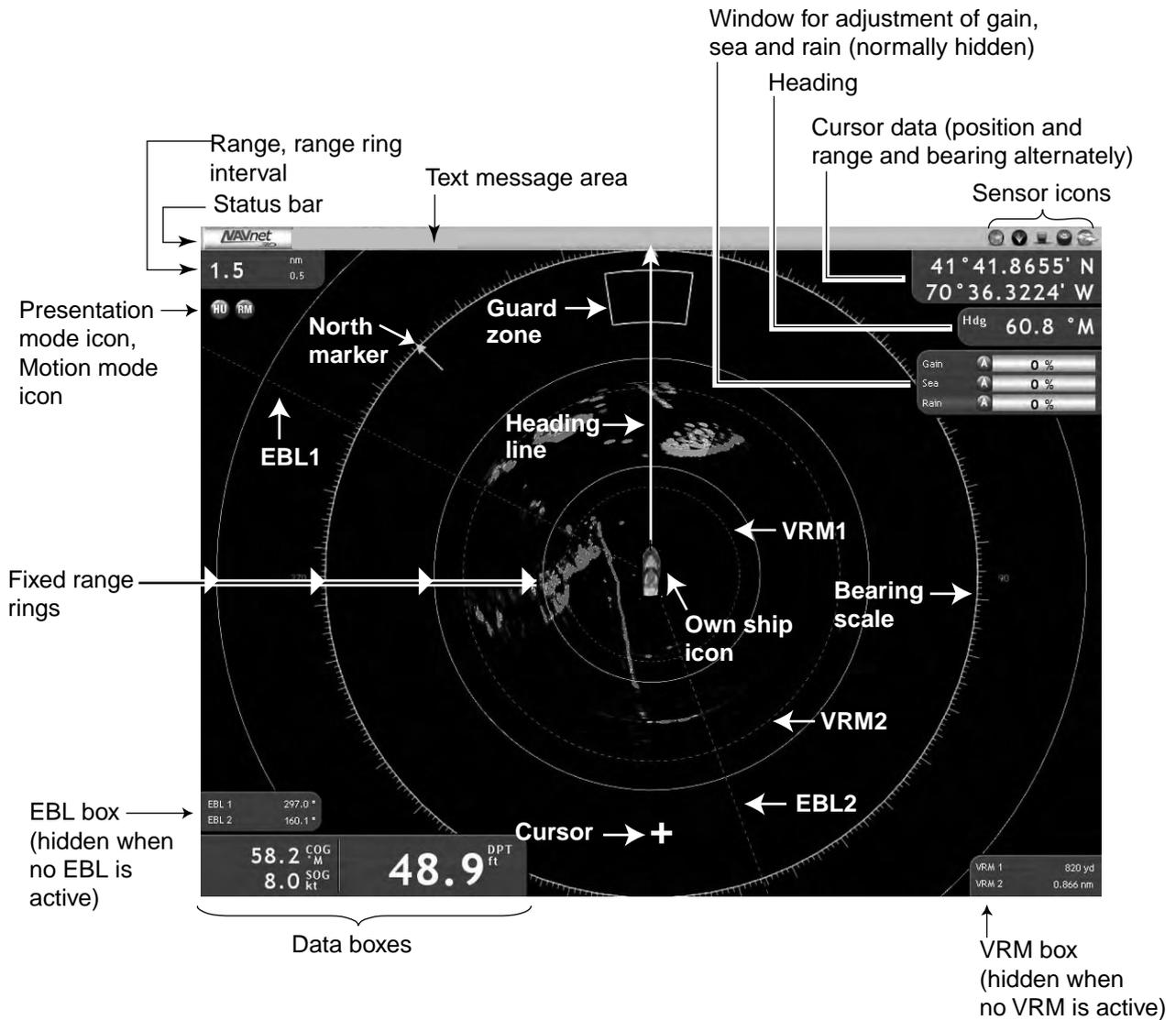


Route on Routes list

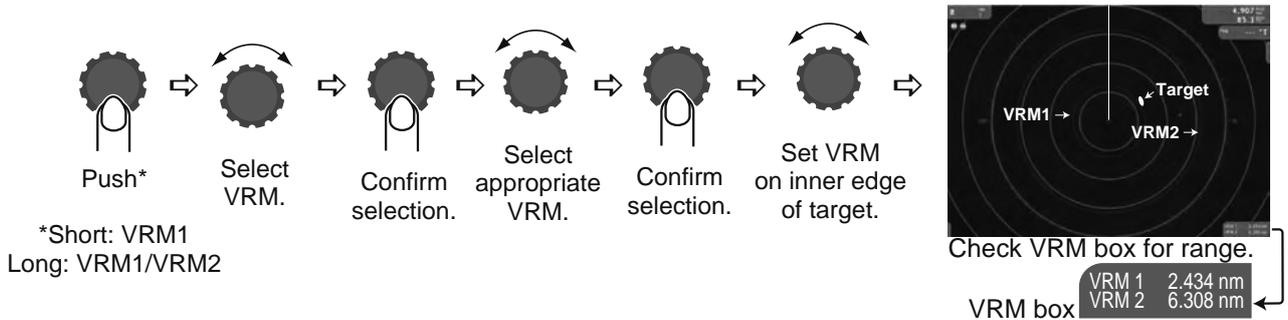


Radar

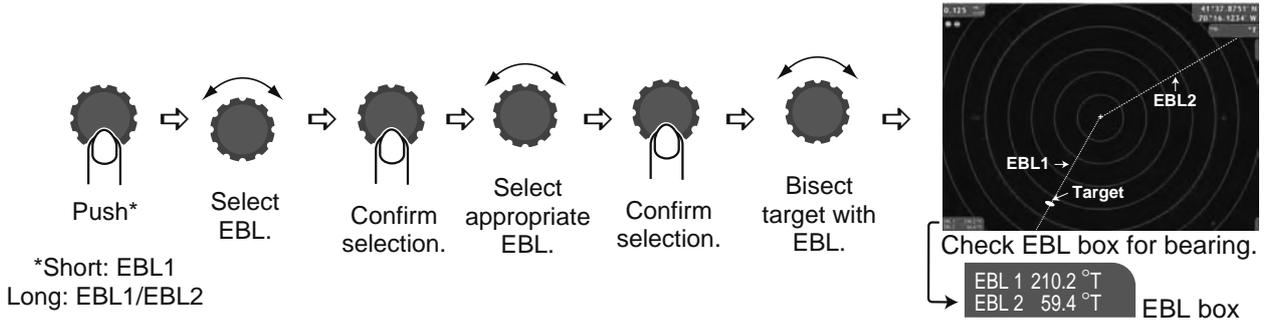
Radar display



Measuring distance to a target

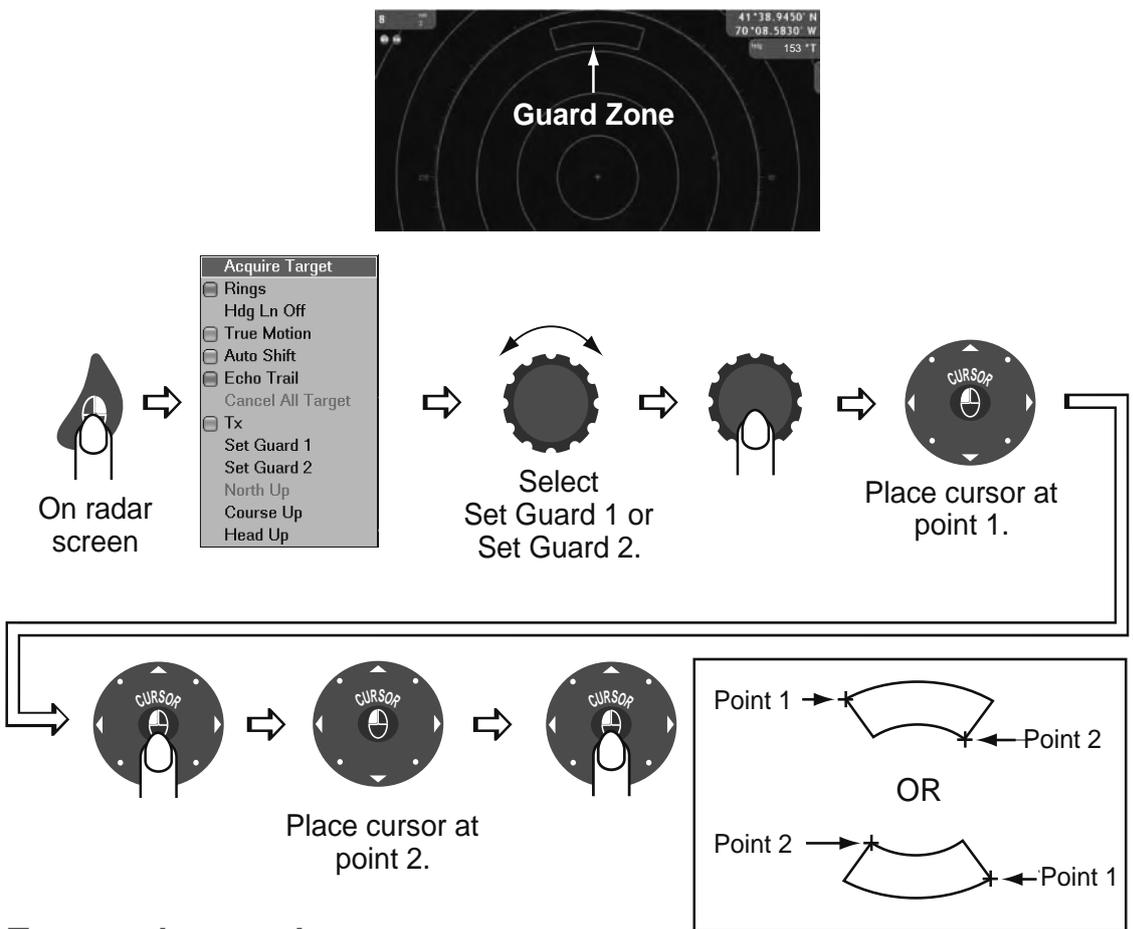


Measuring bearing to a target

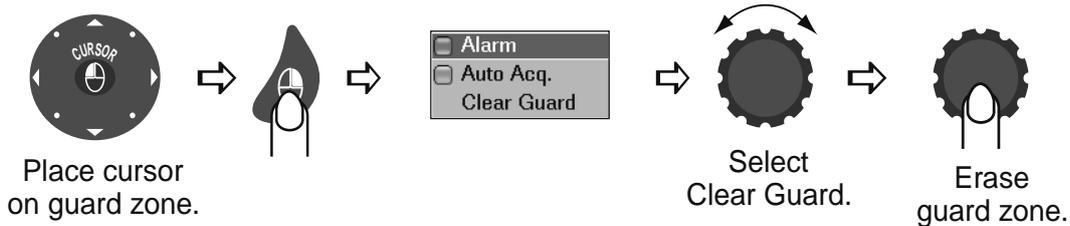


Setting a guard zone

A guard zone alerts you with audio and visual indications when a target enters the alarm zone.



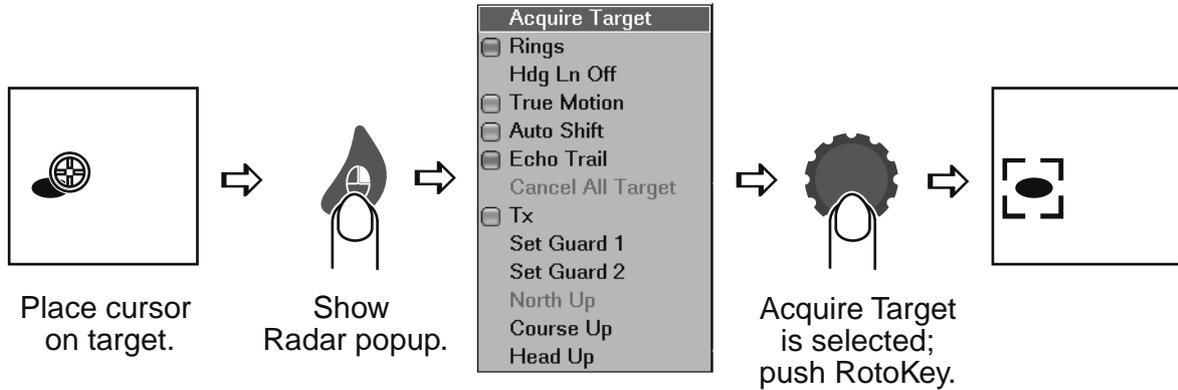
To cancel a guard zone:



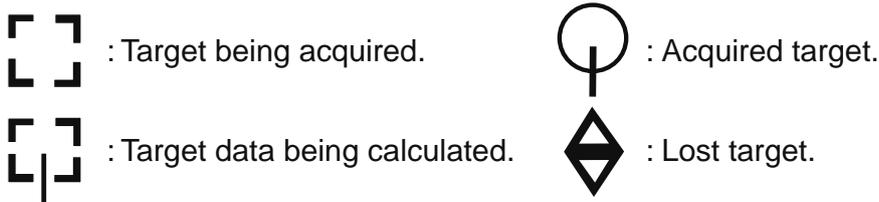
Using ARPA

The Automatic Radar Plotting Aid (ARPA) is a radar function for target tracking and collision avoidance. ARPA tracks and provides detailed information for up to 30 targets. You can track targets automatically, manually or a combination of both.

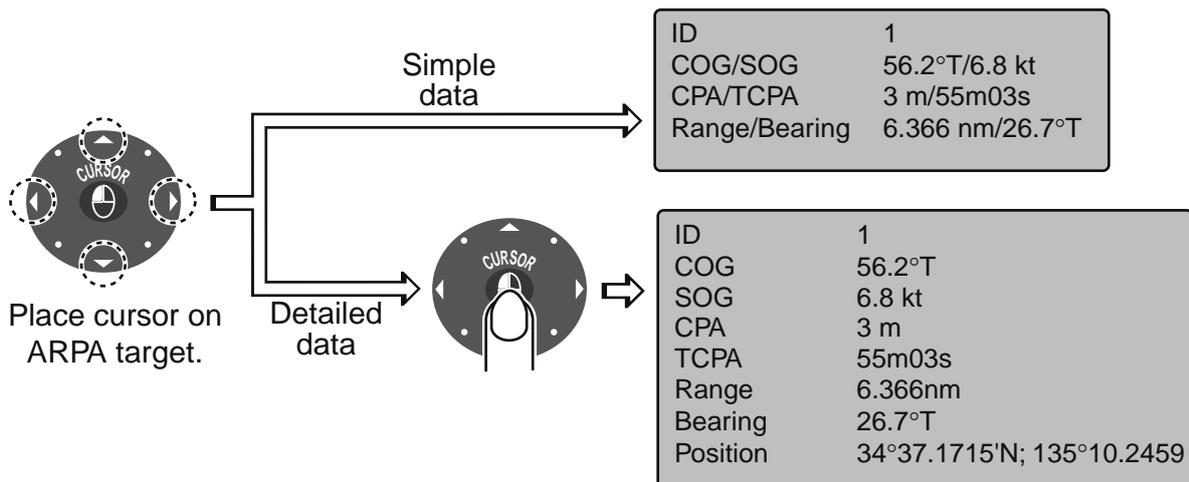
Manually acquiring a target



ARPA target symbols

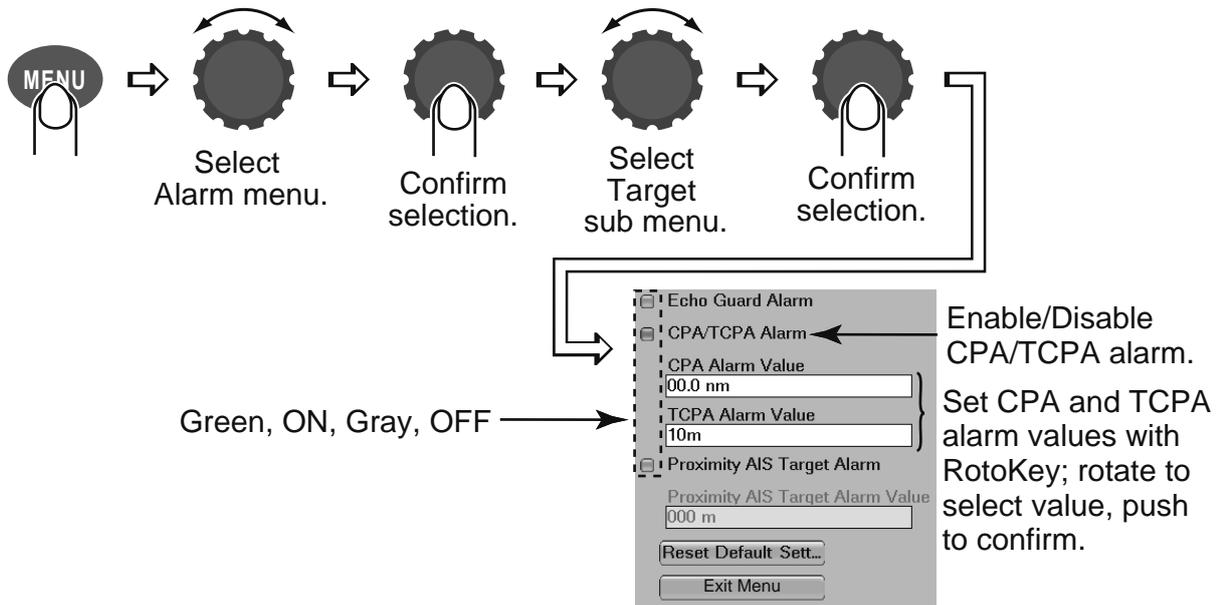


Showing target data

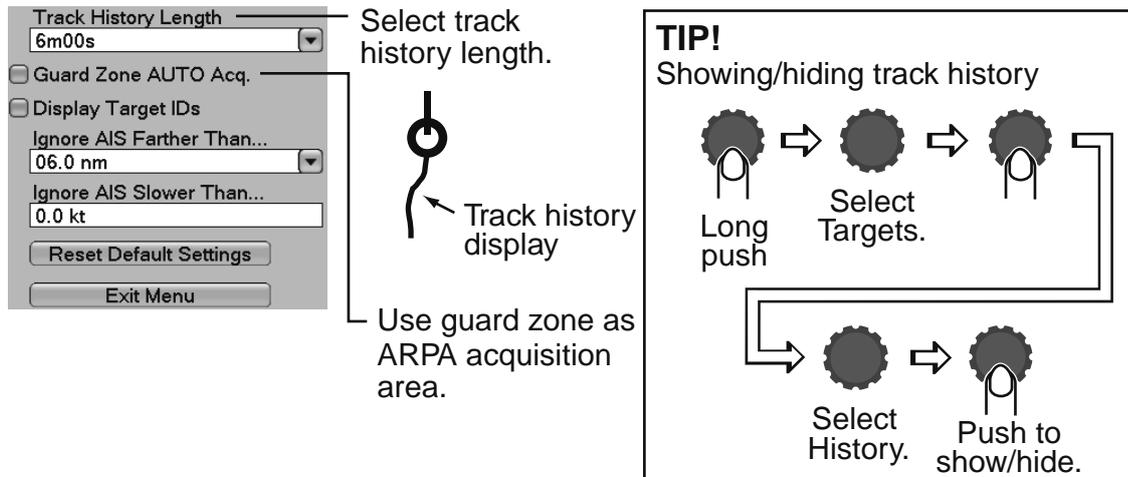


CPA/TCPA alarm

The CPA/TCPA alarm alerts you (with audio and visual alarms) when a tracked target violates the selected limits.

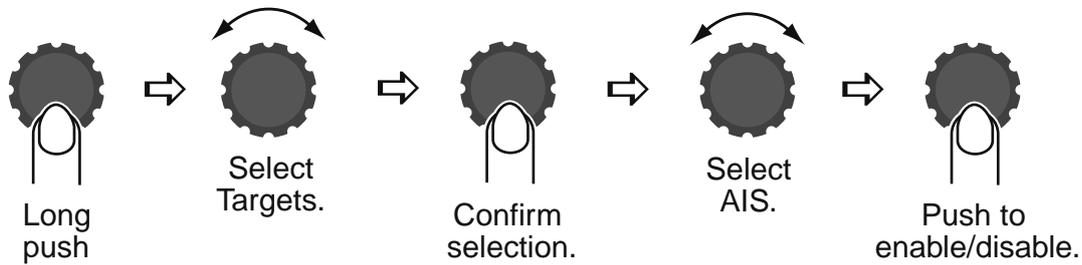


Targets menu operation



AIS

Enabling, disabling AIS



AIS target symbols

Symbol	Target type	Color
	AIS target	Blue
	Dangerous AIS target	Red
	Lost AIS target	Blue

Targets menu operation

Green, ON, Gray, OFF

Track History Length
6m00s

Guard Zone AUTO Acq.

Display Target IDs

Ignore AIS Farther Than...
06.0 nm

Ignore AIS Slower Than...
0.0 kt

Reset Default Settings

Exit Menu

Select track history length.

Track history display

Display targets' IDs.

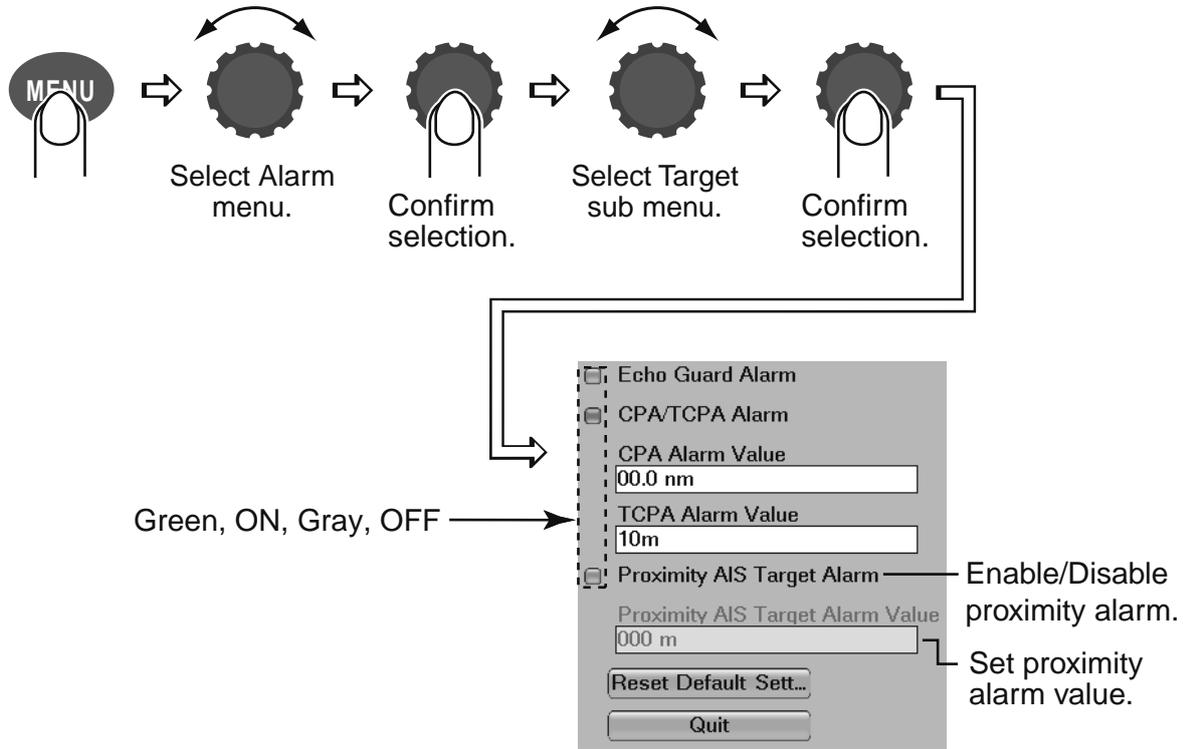
AIS targets at distances greater than set here are not displayed.

AIS targets within the proximity AIS target alarm range whose speeds are slower than set here do not trigger the alarm.

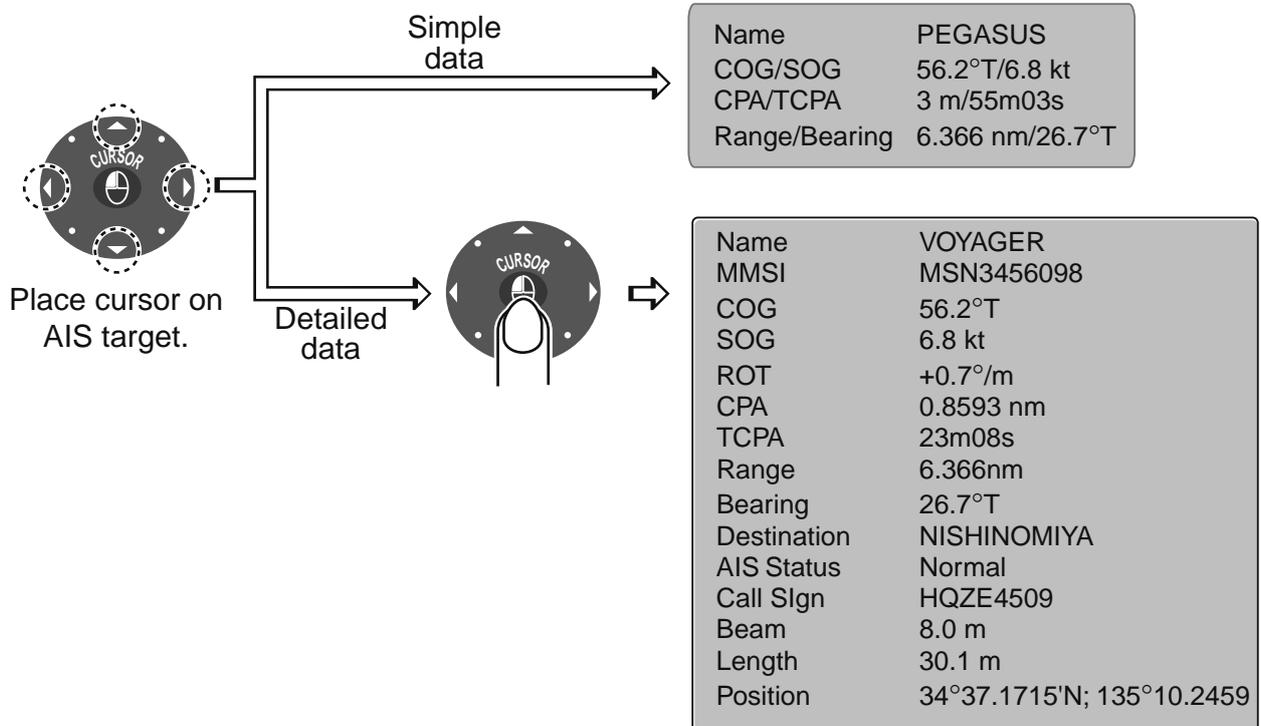
TIP!
Showing/hiding track history

AIS proximity alarm

The AIS proximity alarm alerts you (with audio and visual alarms) when an AIS target comes within a specific distance.

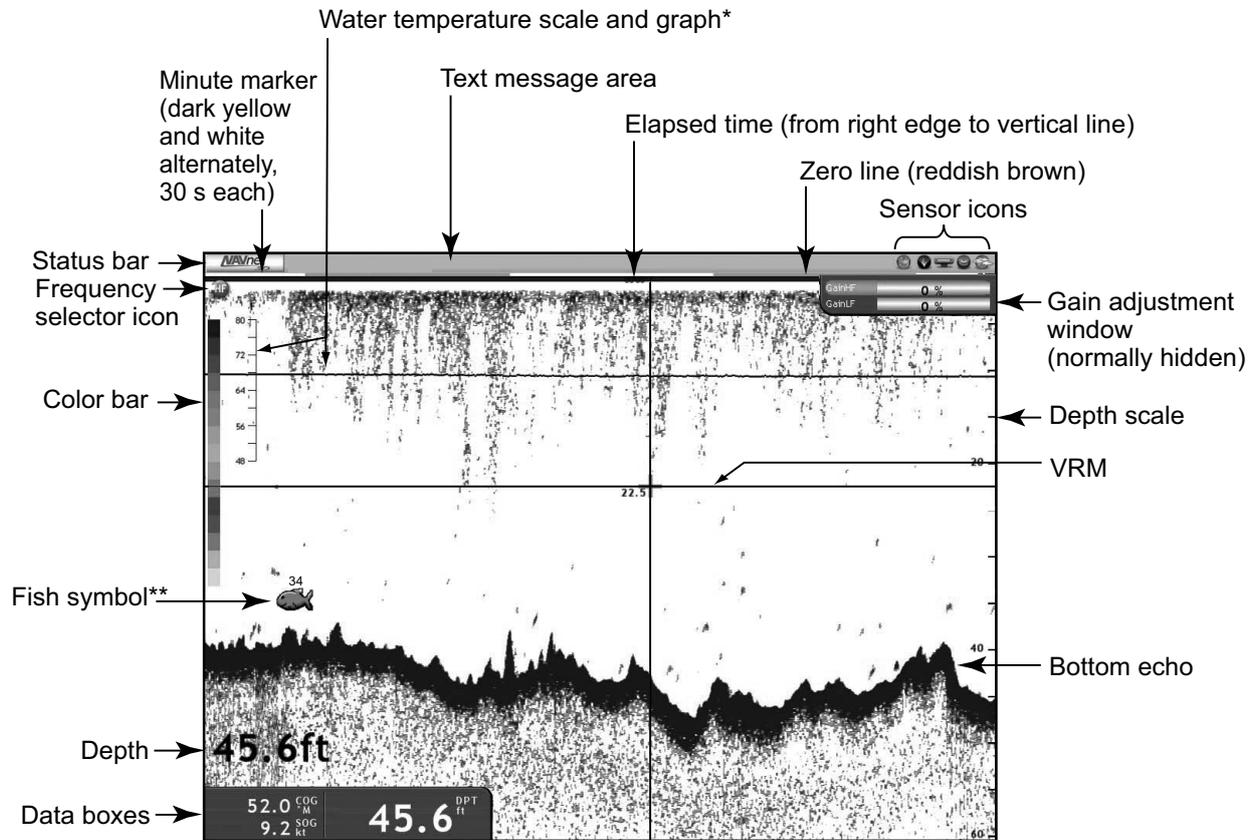


Showing AIS target data



Fish Finder

Fish finder display



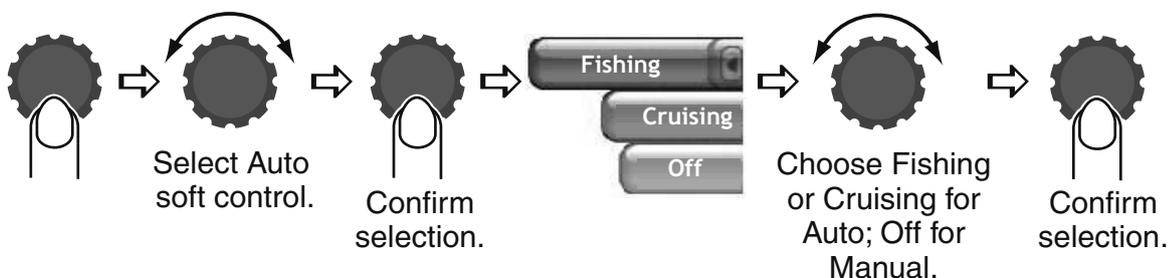
* Requires water temperature sensor.

**ACCU-FISH feature estimates length of individual fish.

(Requires appropriate transducer and Bottom Discrimination Sounder BBDS1, Network Sounder DFF1 or DFF3, or Color LCD Sounder FCV-1150.)

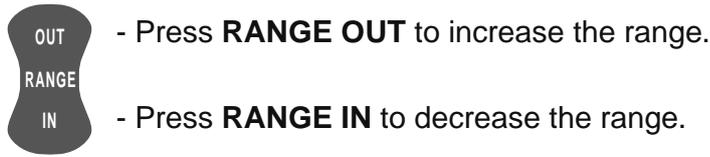
Selecting automatic or manual operation

Your fish finder can be operated automatically or manually. In automatic operation, range, gain and clutter are automatically adjusted.

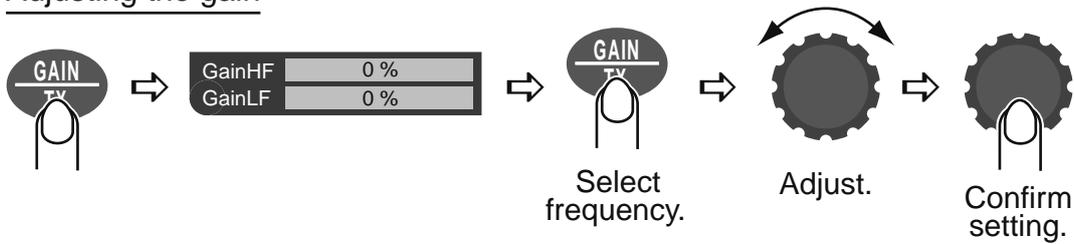


Manual operation

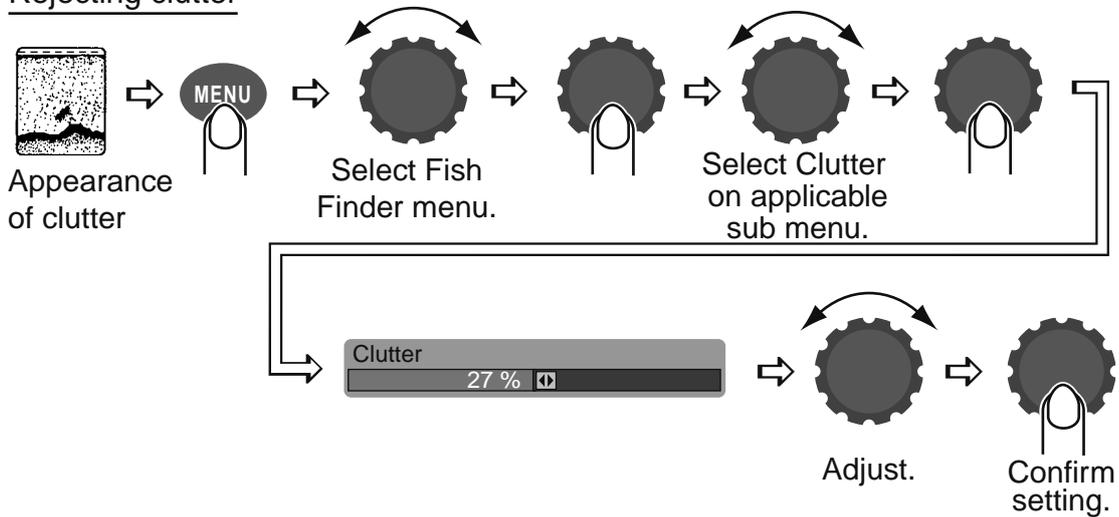
Selecting a range



Adjusting the gain



Rejecting clutter

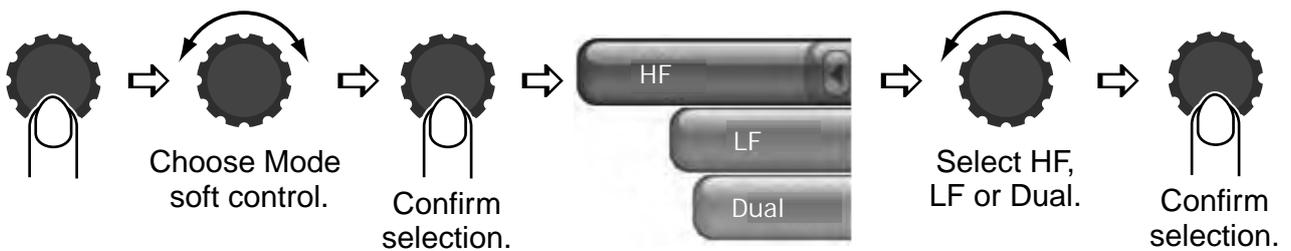


Selecting operating frequency

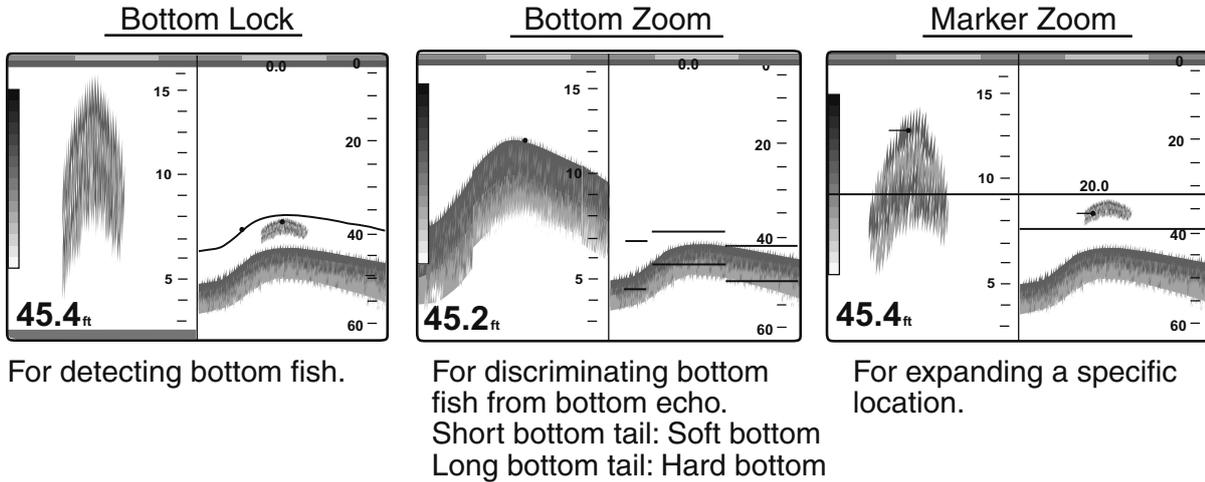
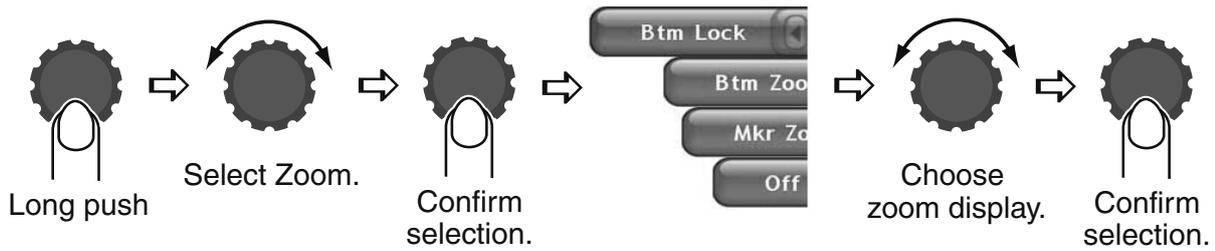
Low frequency: Use for general detection and judging bottom conditions.

High frequency: Use for detailed observation.

Dual: Both high and low frequencies.

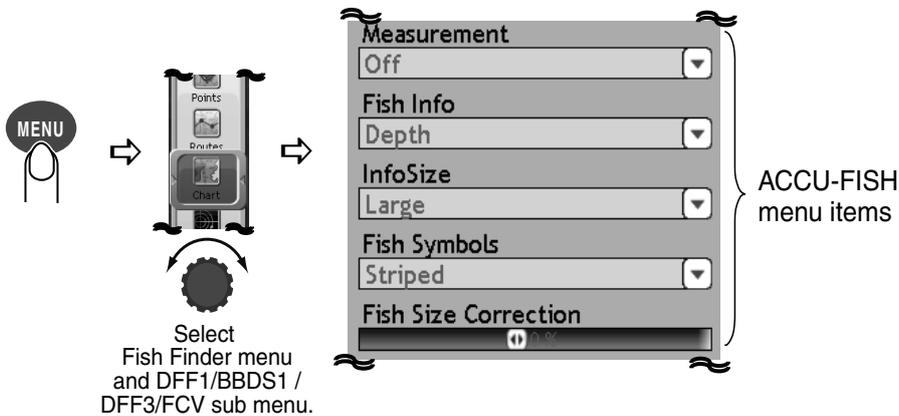


Zoom display



ACCU-FISH

ACCU-FISH measures the depth and length of individual fish, showing measured fish with a symbol and length or depth indication.

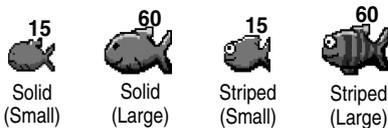


Measurement: Activate/Deactivate ACCU-FISH. **15**

Fish Info: Show fish length or depth (in red).

Info Size: Set size of numeric indication to large or small.

Fish Symbols: Select desired fish symbol from solid or striped. Size is either large or small depending on length of fish.



Fish Size Correction: If the length indication is wrong apply offset here.