

## MFD8/MFD12

*User's Handbook*



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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### Table of Contents

Operating Controls .....	2
How to Use the Controls .....	3
Using the SD Cards .....	4
General .....	5
Chart Plotter .....	7
Radar .....	13
AIS .....	17
Fish Finder .....	19



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# Operating Controls

### Go to cursor location

**GO TO LIST** Momentary push

↓

Own ship  
Cursor

### Showing points list

**GO TO LIST** Long push

↓

PT 0001 352.3 nm 87.7 PT  
PT 0002 318.8 nm 134.8 PT

### Adjusting audio volume

**DATA VOL** Long push → Audio volume level → Adjust. → Confirm.

### Data boxes on/off

**DATA** Momentary push

### Moving the cursor

**CURSOR** Cursor moves in direction of arrow or diagonal pushed.

### Finding object information

→ →

### Showing pop-up menu

Place cursor with

↓

Push

Manual Mode  
Go To  
Point by Lat/Long  
New Point  
New Route

### Entering a point

+ Place cursor with Cursorpad.

↓

**POINTS ROUTE** Momentary push

↓

See page 9 for details.

### Creating a route

+ Place cursor with Cursorpad.

↓

**POINTS ROUTE** Long push

↓

Use Cursorpad and left-click button (⊖) to create a route. See page 10 for details.

### Canceling entry

**CANCEL** Push to cancel last entry.

### Selecting a display

**DISP**

↓

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

### Showing the soft controls

Push

For RotoKey operation, see page 3.

### Switching active display

**CTRL** → ACTIVE → **CTRL**

### Adjusting gain, sea and rain clutters

**GAIN TX** Momentary push

Radar  
Gain  
Sea  
Rain

Select Gain, Sea or Rain.

Fish finder  
GainHF  
GainLF

Select HF or LF.

**GAIN TX** Long push

↓

Toggle TX, STBY in radar.

Adjust. → Confirm.

### Menu operation

**MENU**

Choose menu. → Confirm.

### Selecting range

**OUT RANGE IN**

OUT: Increase range  
IN: Decrease range

### Scrolling the display (pad)

Scroll the radar, chart plotter display in the direction of the arrow or diagonal pressed.

### Saving point at current position

**SAVE MOB** Momentary push → Point

### Marking MOB position

**SAVE MOB** Long push → MOB mark

### Centering own ship

**SHIP** Momentary push

### Power on/off

**ON:** Momentary push  
**OFF:** Long push (3 sec)

### Adjusting brilliance, panel dimmer

Push → Brill/Dimmer → Rotate to adjust; push to confirm.

### 3D display on/off


**2D display** → **3D aerial view display**

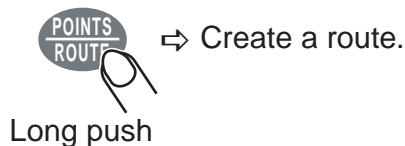
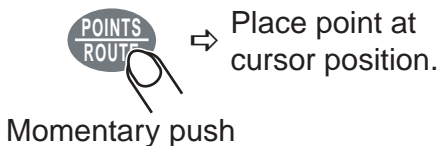
**SHIP 3D** Long push to get 3D display

**SHIP 2D** Long push again to get 2D display



# How to Use the Controls

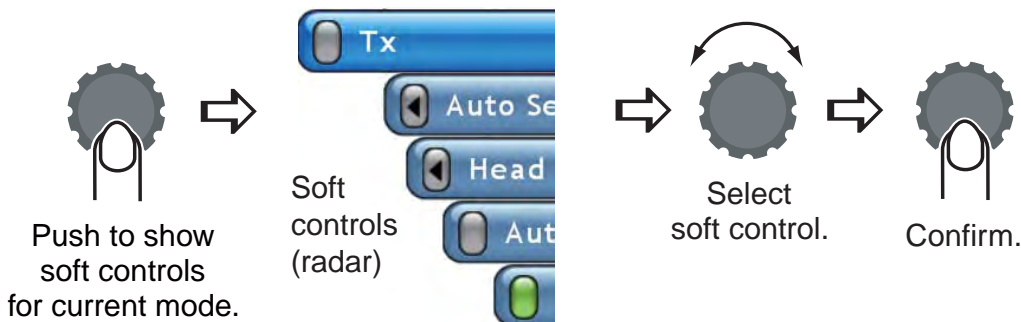
## Keys

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)

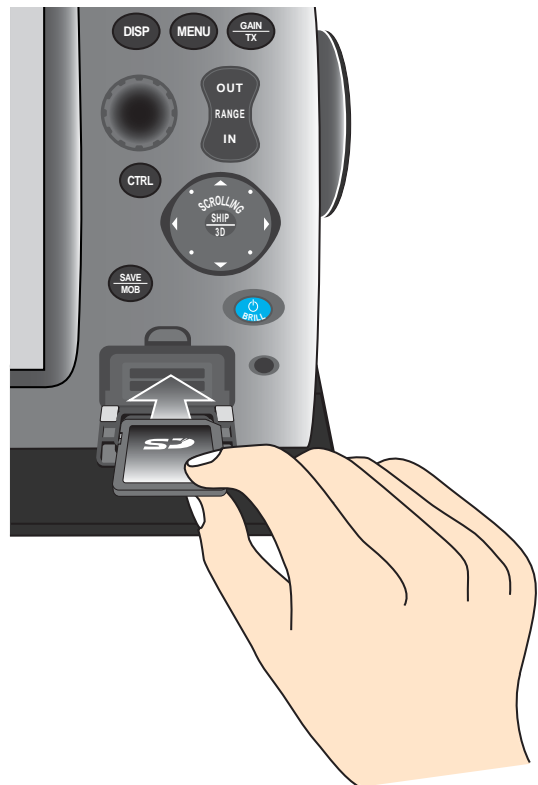
# Using the SD Cards

## 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 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.

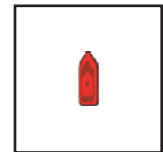
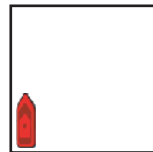
## Scrolling the chart, radar picture



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

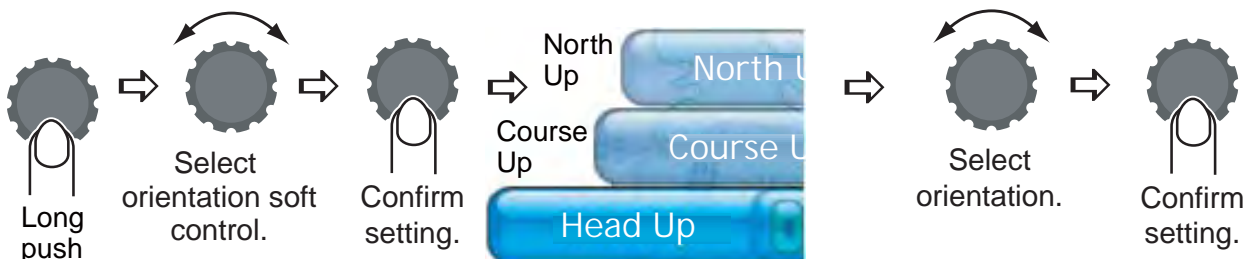
## Chart, radar picture orientation

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.

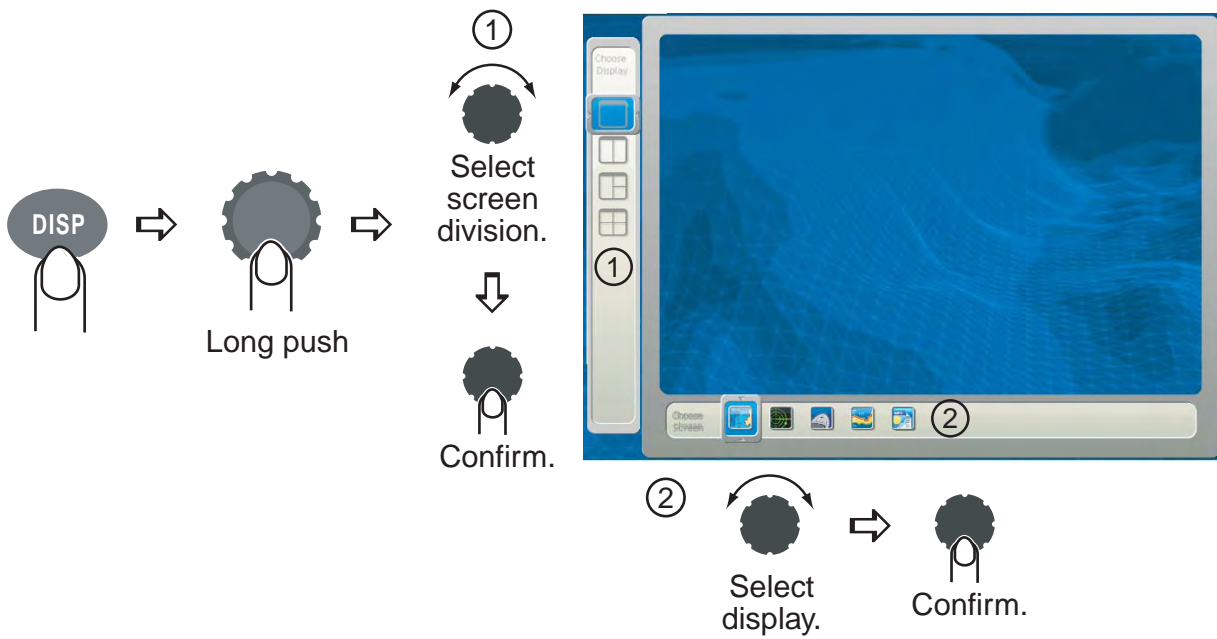
**Course-up:** Destination is always at the screen top.



## Selecting a display

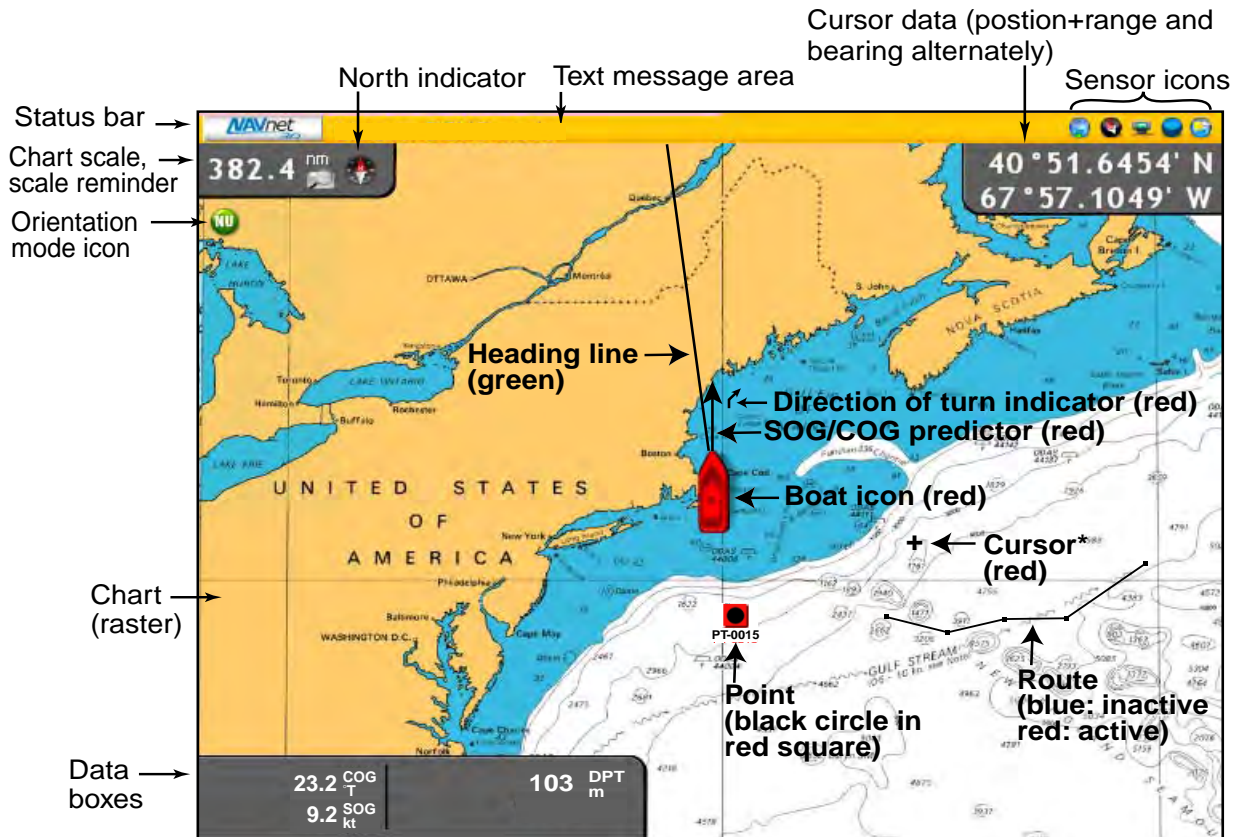



## Presetting the display selection screen



# Chart Plotter

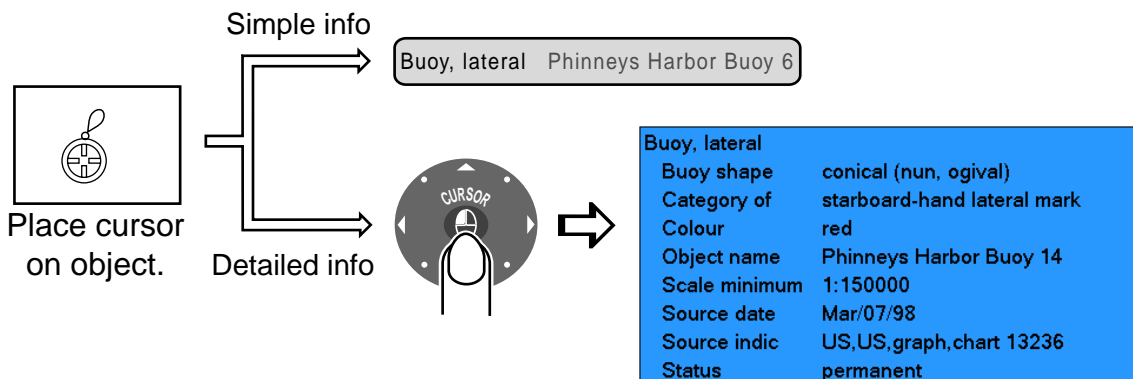
## Chart plotter display



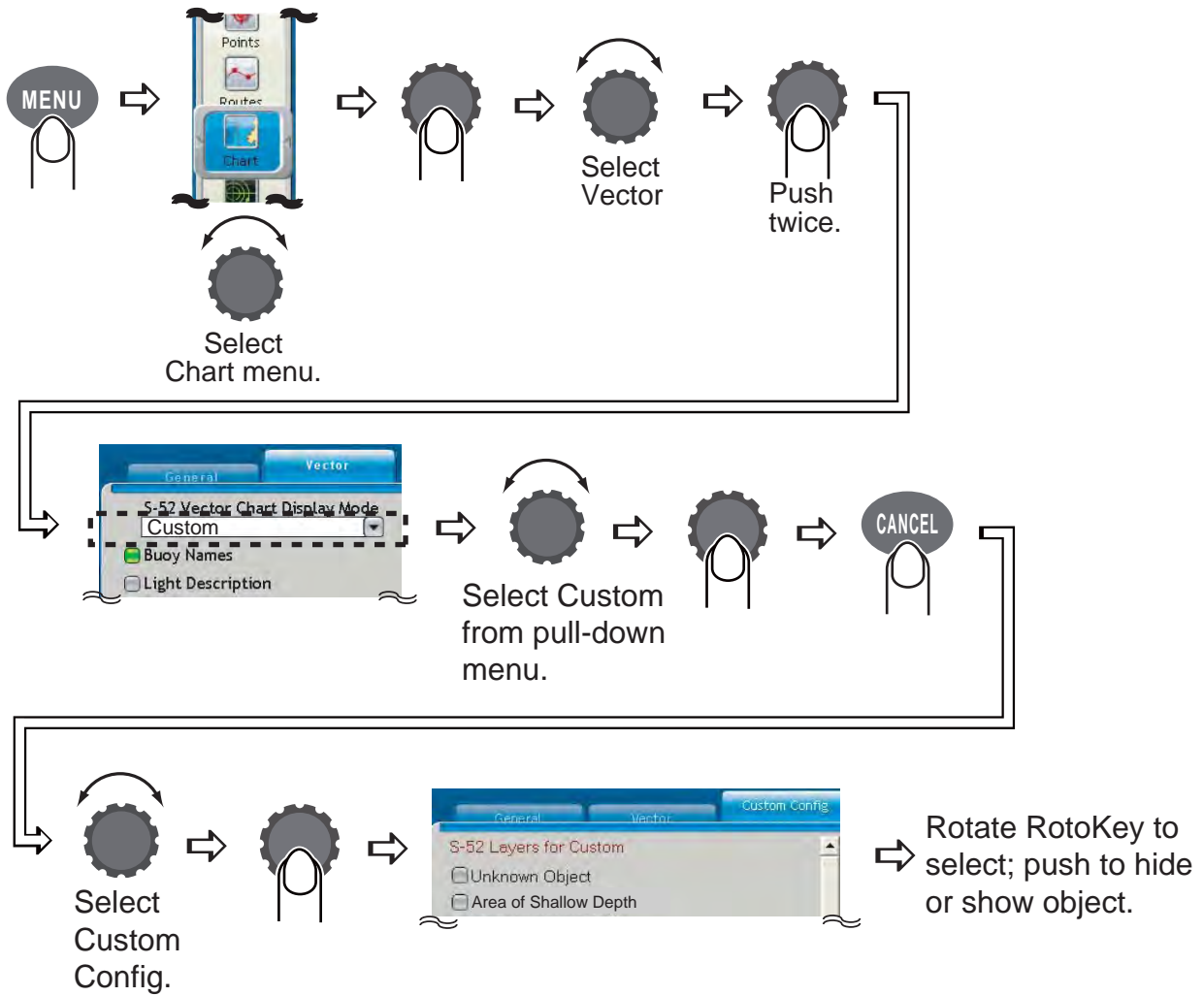
\* Inactive cursor. Active cursor looks like this .

## Cartographic features

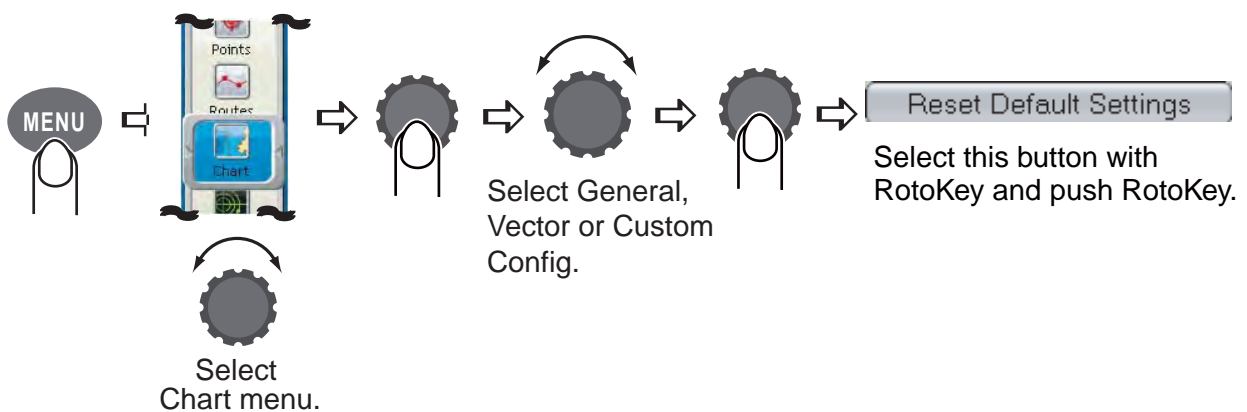
### Finding information about a cartographic object



## Hiding/Showing cartographic features, text information

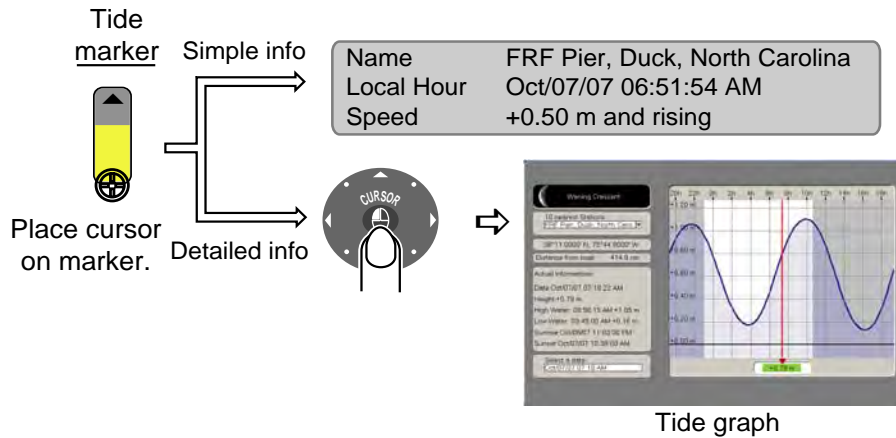
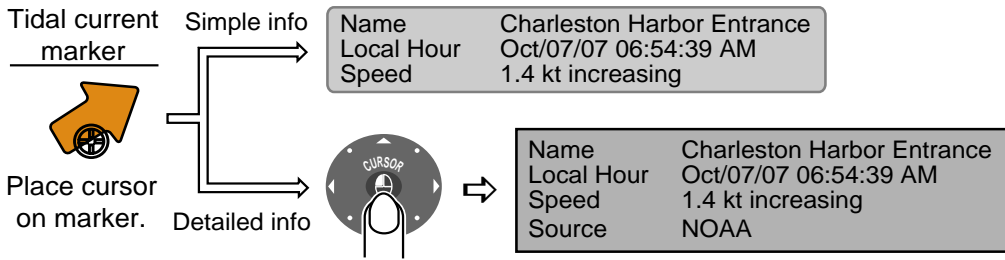


## Restoring default cartographic features





## Showing tidal current and tide information

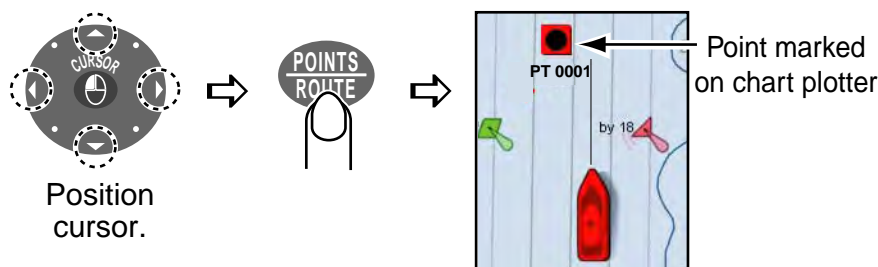


## How to use points

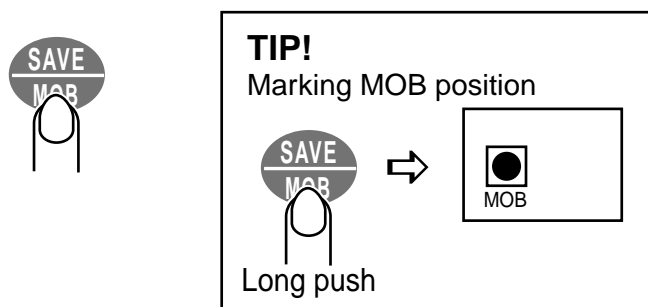
A point marks a geographical position on the chart plotter. You can mark points at the cursor position, ship's position, or at a specified location. Points are marked on the screen with the waypoint symbols (●) and waypoint numbers. Points are stored in the points list, where you can edit, delete or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

### Placing a point

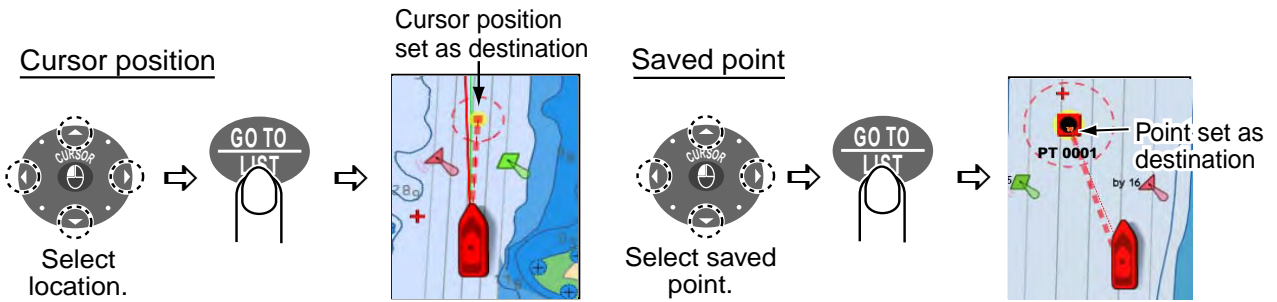
#### At cursor location



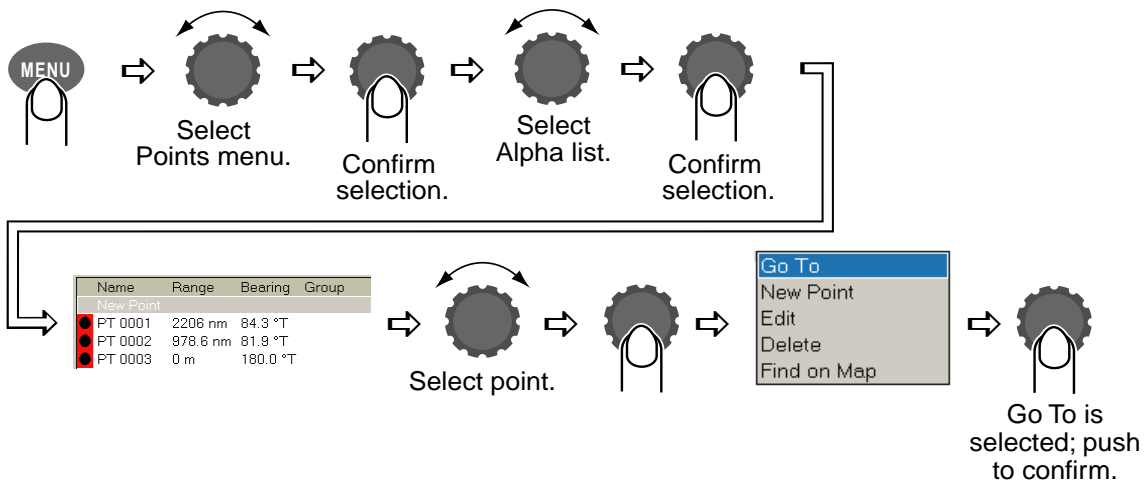
#### At own ship's position



## Going to a point

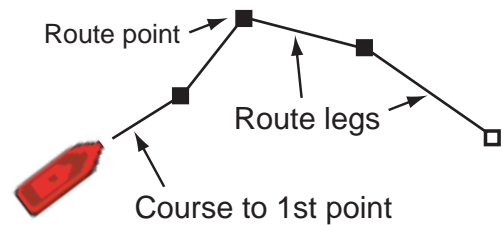


## Using the points list

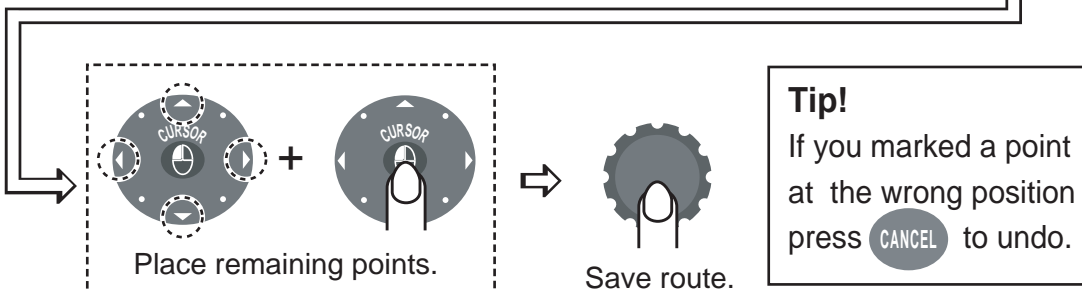
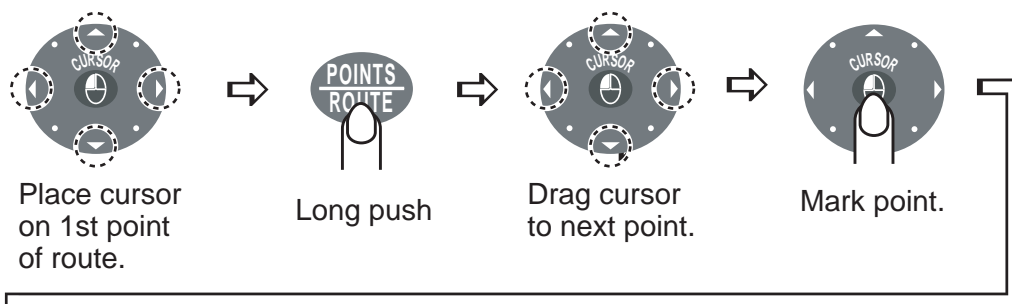


## Routes

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

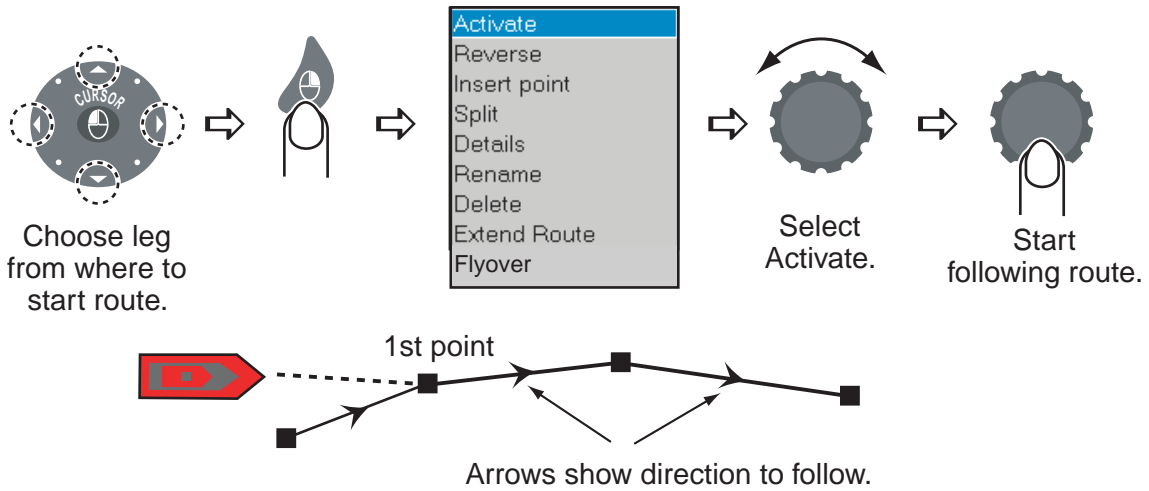


### Tip!

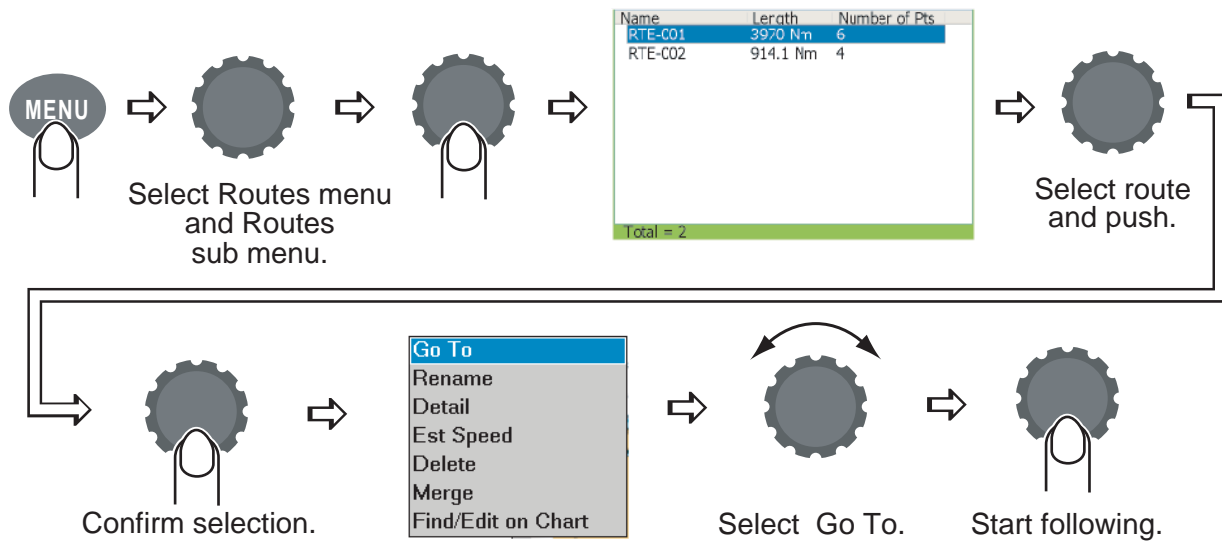
If you marked a point at the wrong position press **CANCEL** to undo.

# Following a route

## On-screen route

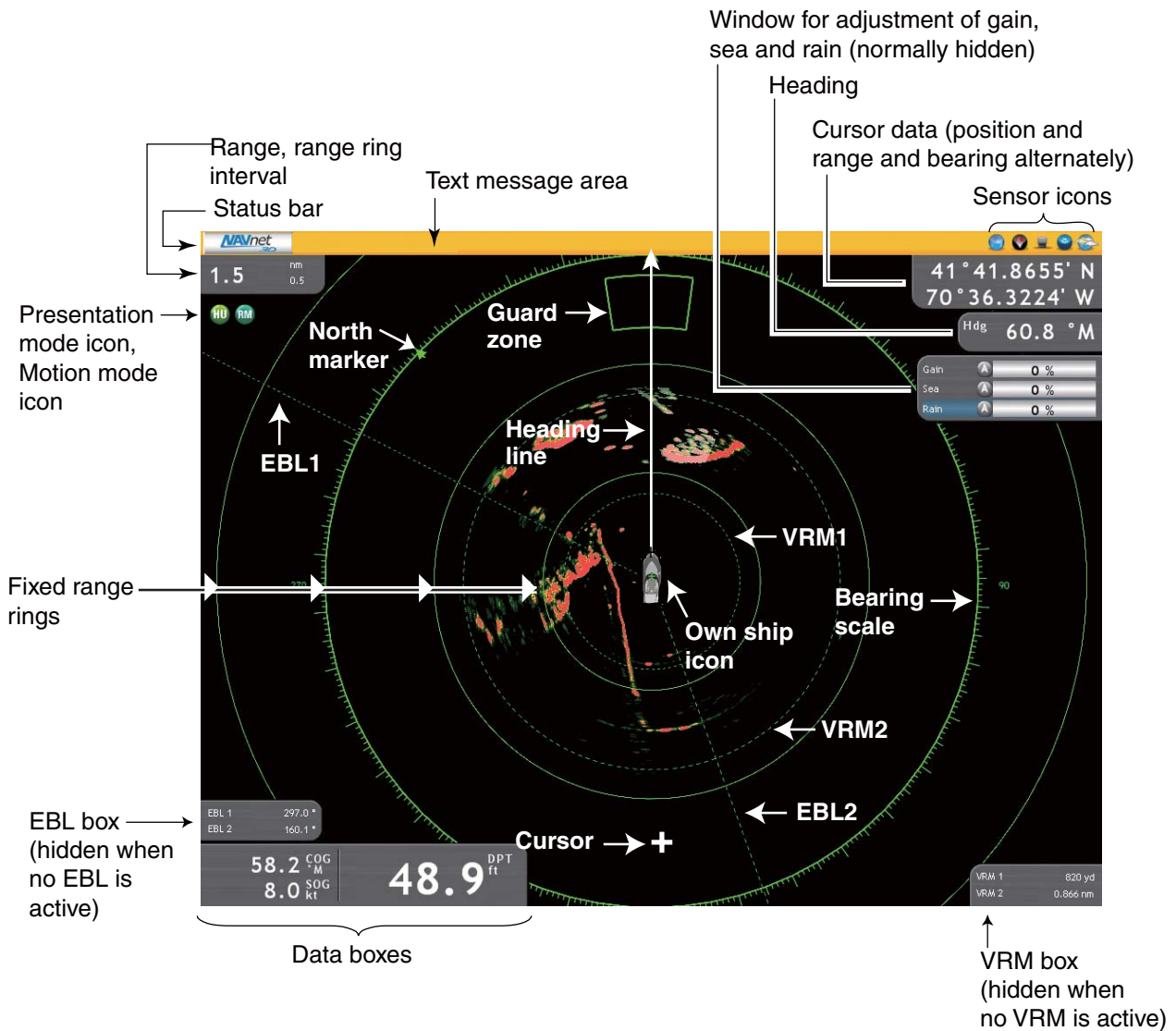


## Route on Routes list

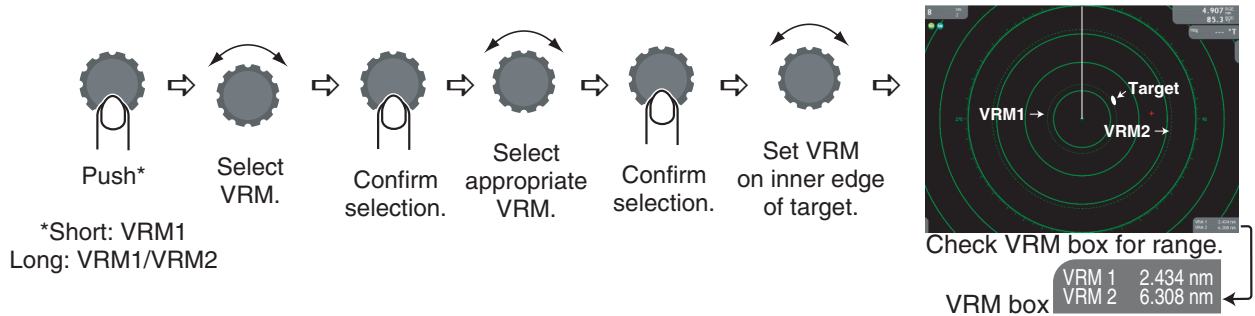


# Radar

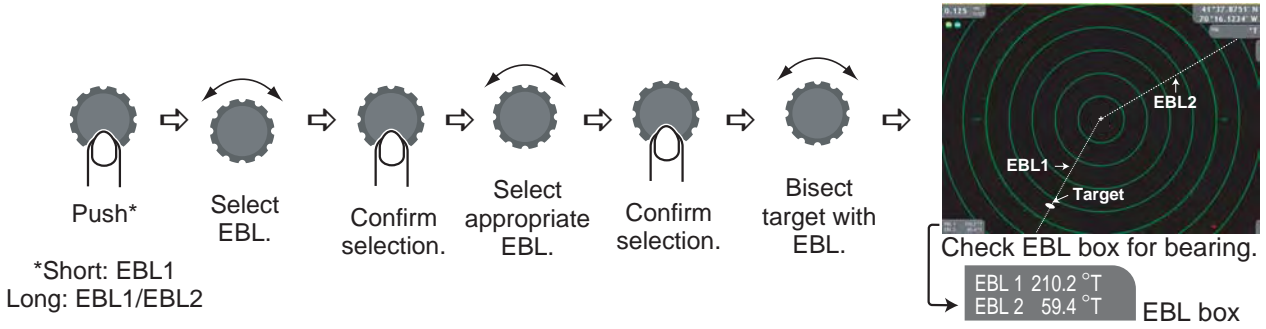
## Radar display



## Measuring distance to a target

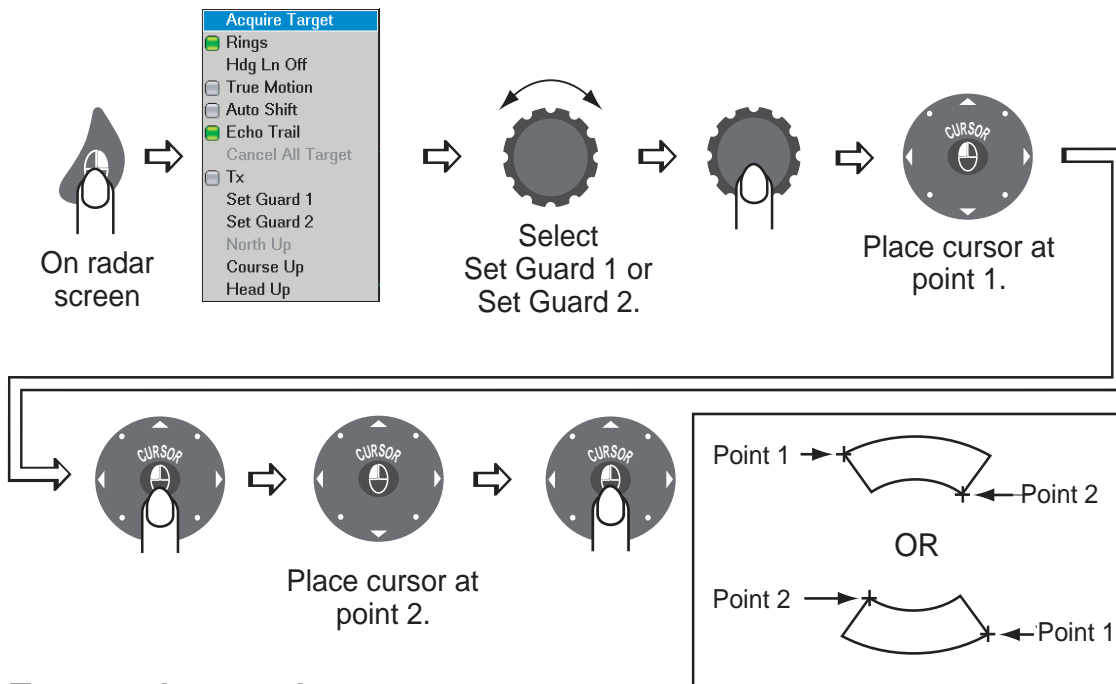
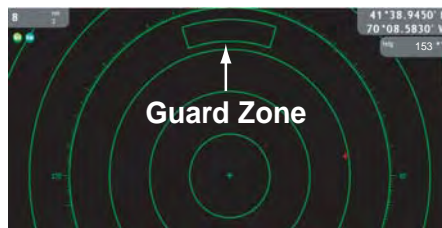


# Measuring bearing to a target

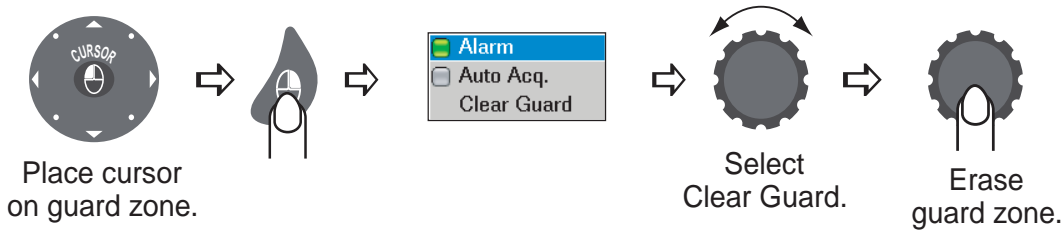


# Setting a guard zone

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



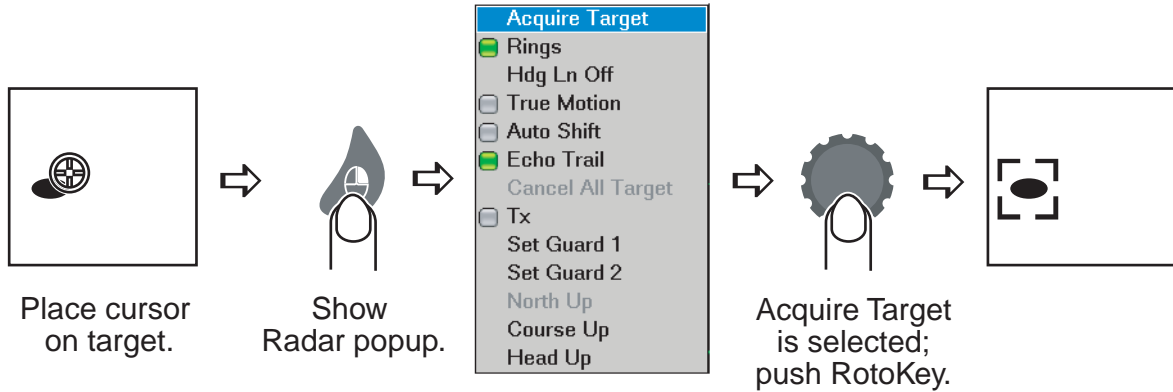
## To cancel a guard zone:



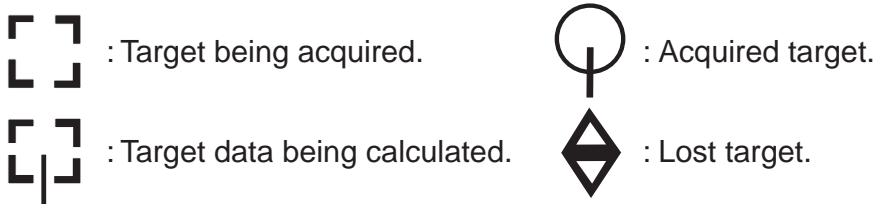
# Using ARPA

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.

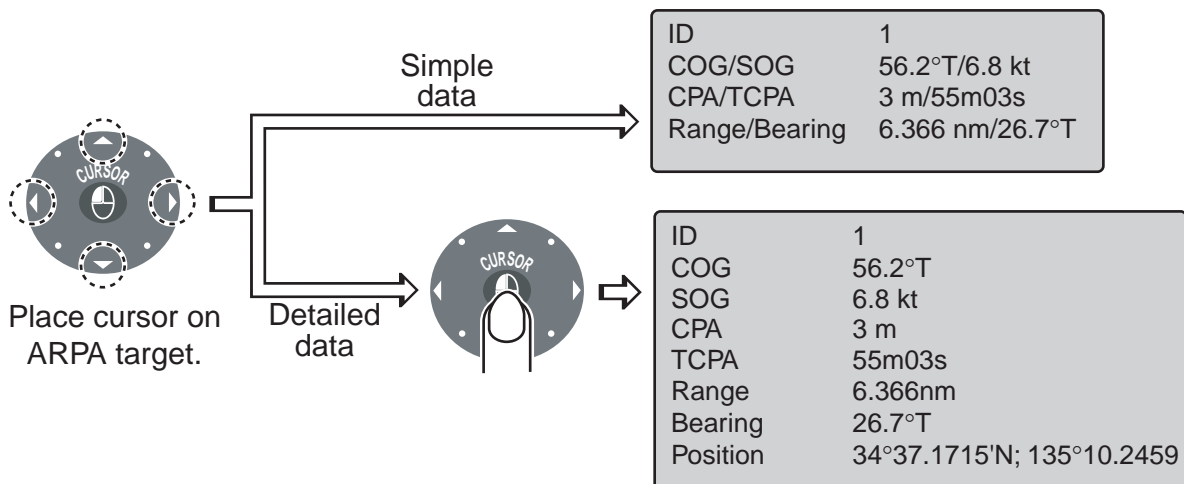
## Manually acquiring a target



## ARPA target symbols

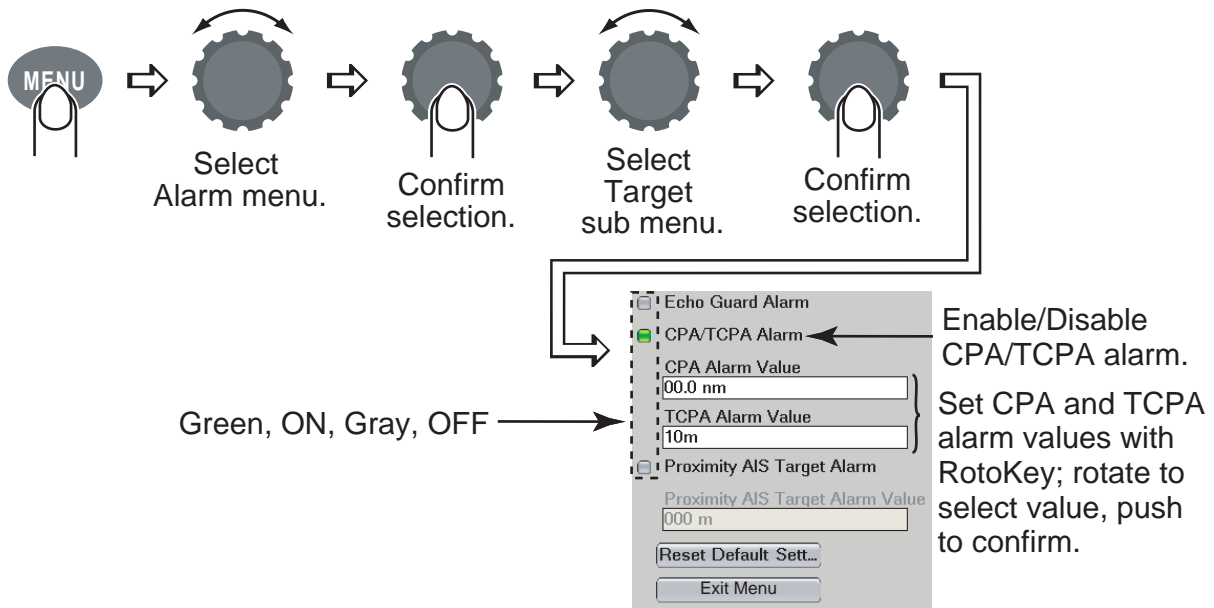


## Showing target data

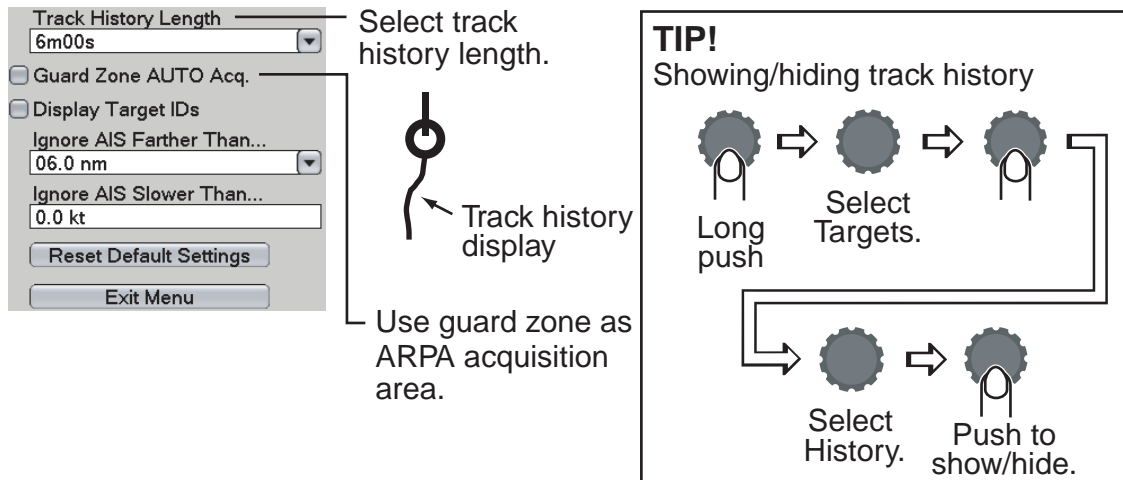


## CPA/TCPA alarm

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

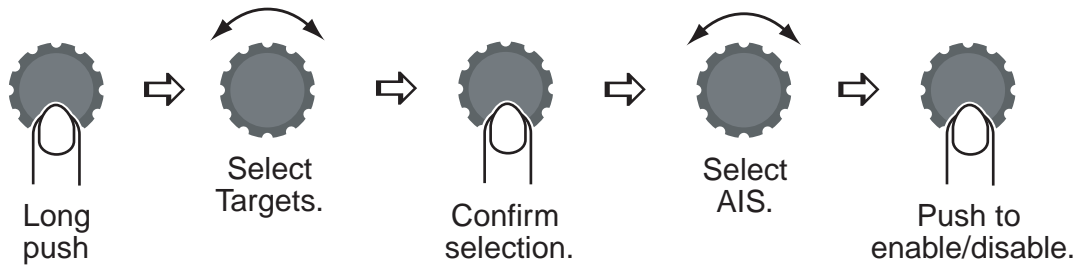


## Targets menu operation



# AIS

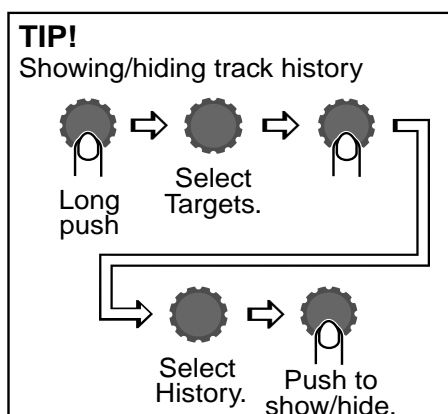
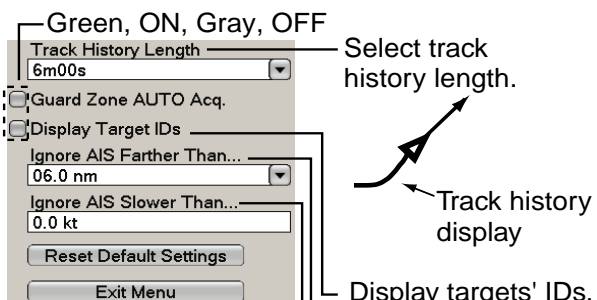
## Enabling, disabling AIS



## AIS target symbols

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

## Targets menu operation

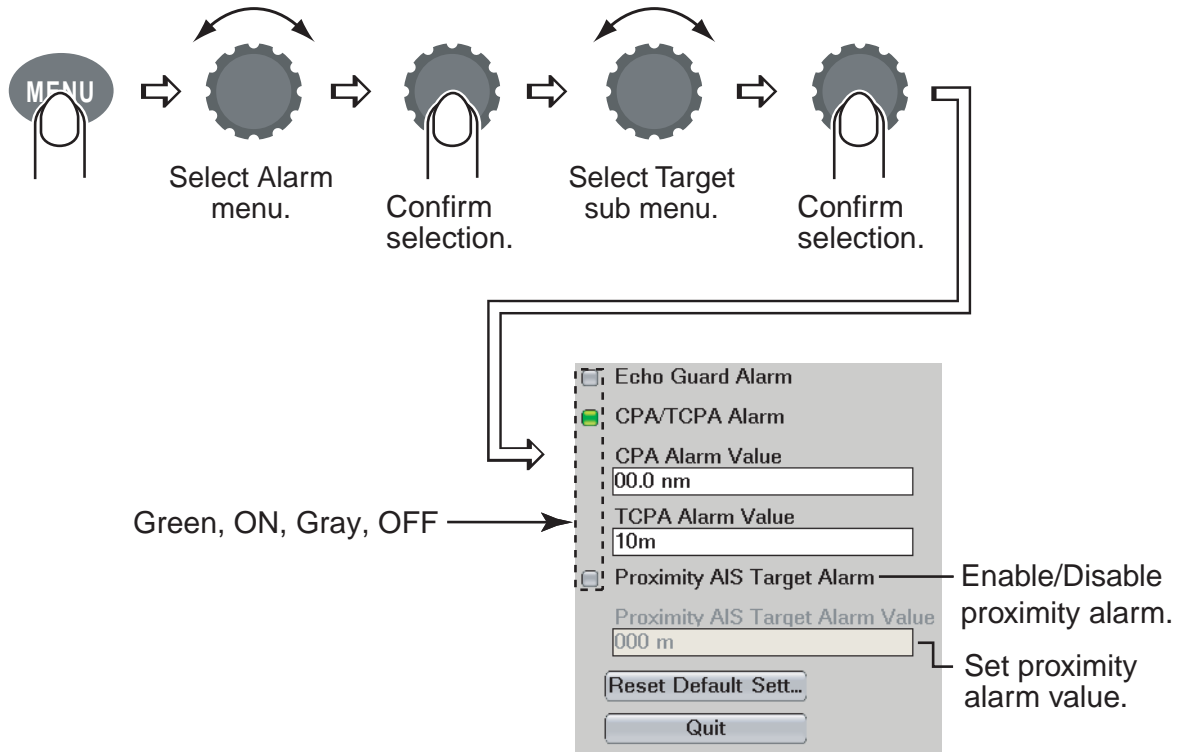


AIS targets within the proximity AIS target alarm range whose speeds are slower than set here do not trigger the alarm.

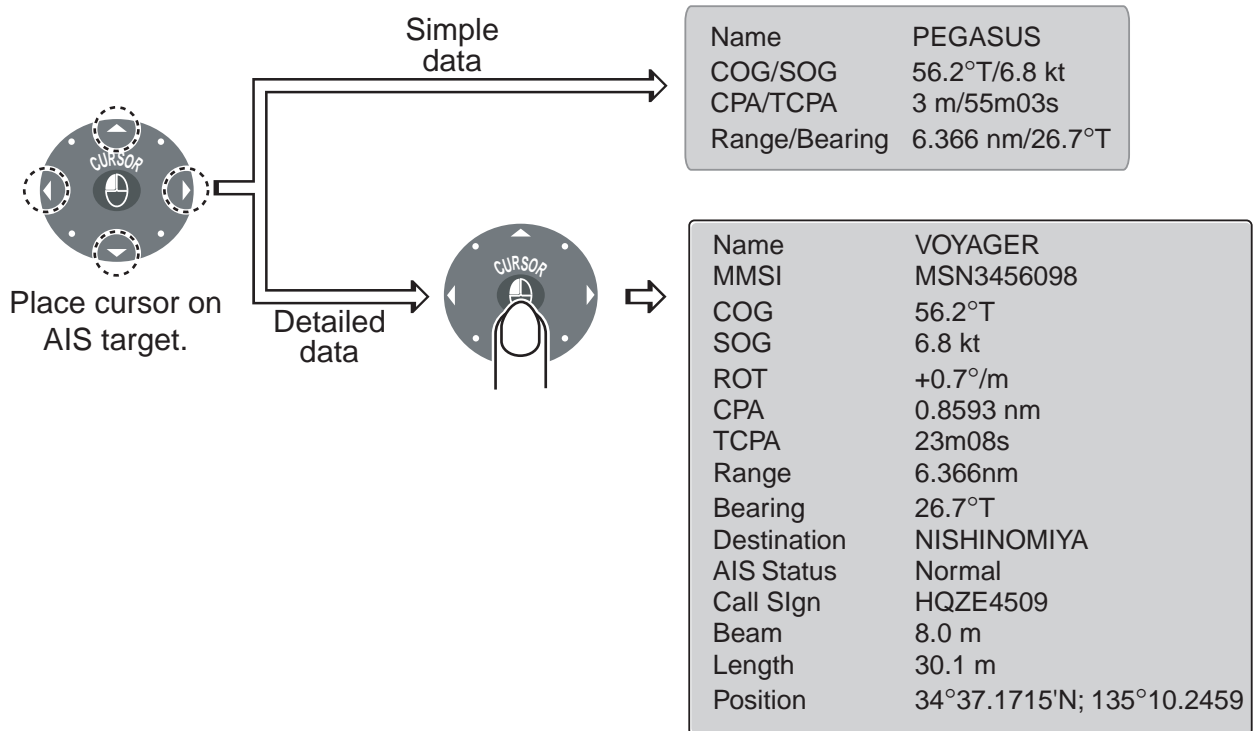


# AIS proximity alarm

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

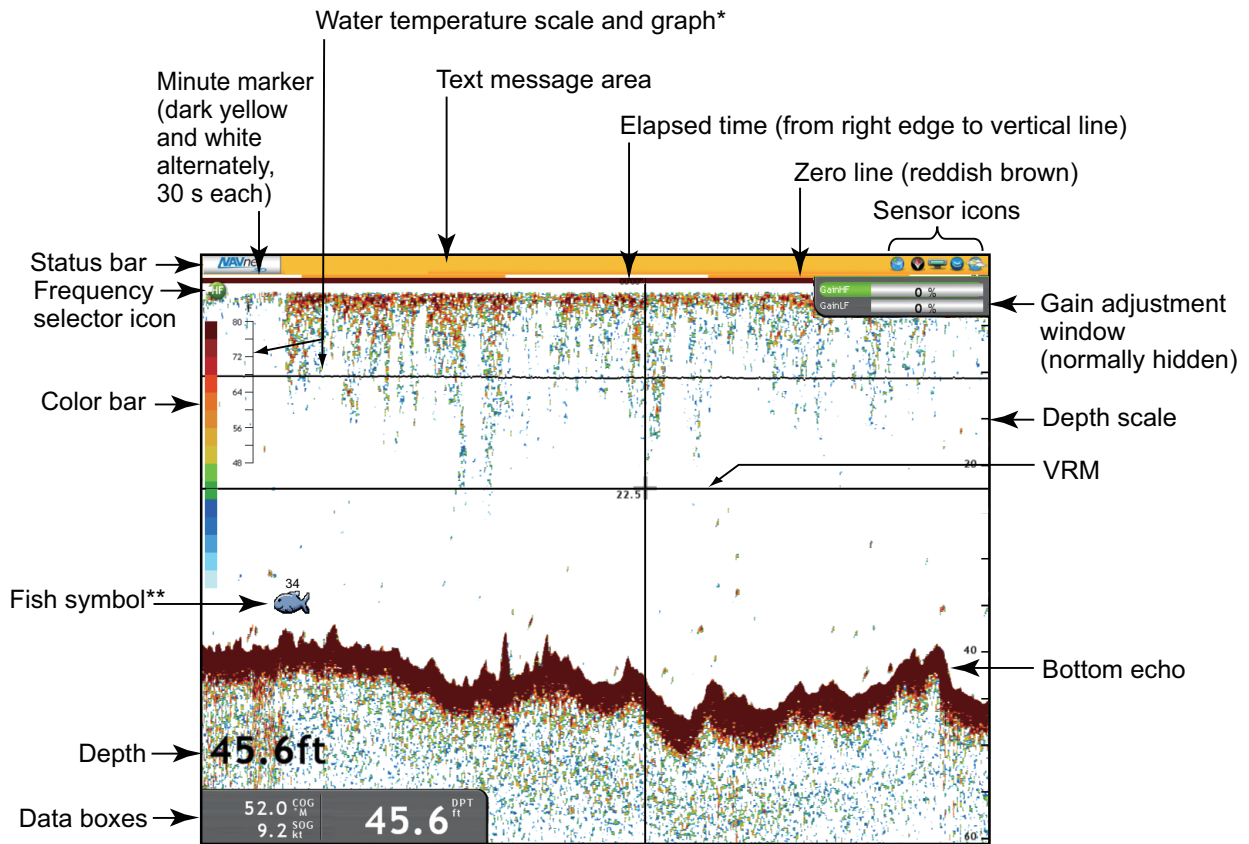


# Showing AIS target data



# Fish Finder

## Fish finder display



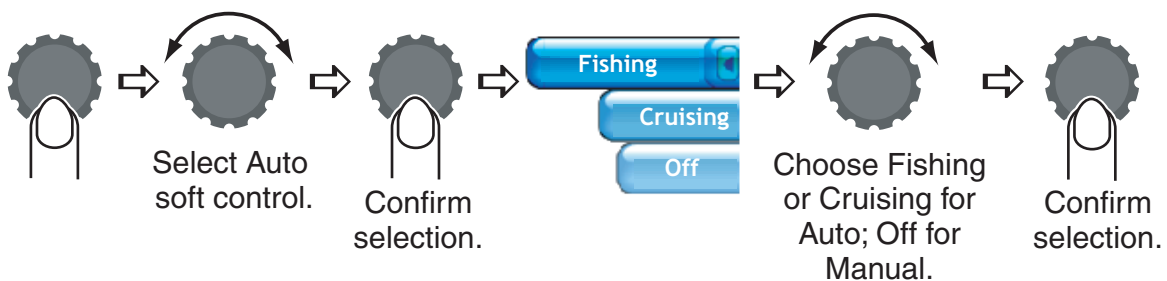
\* Requires water temperature sensor.

\*\*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.)

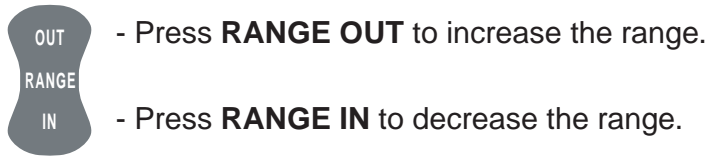
## Selecting automatic or manual operation

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

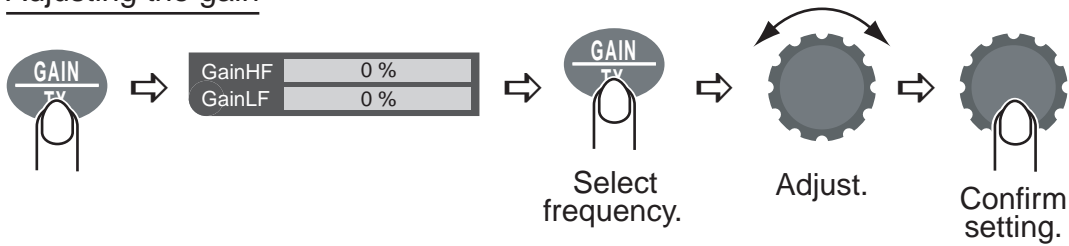


## Manual operation

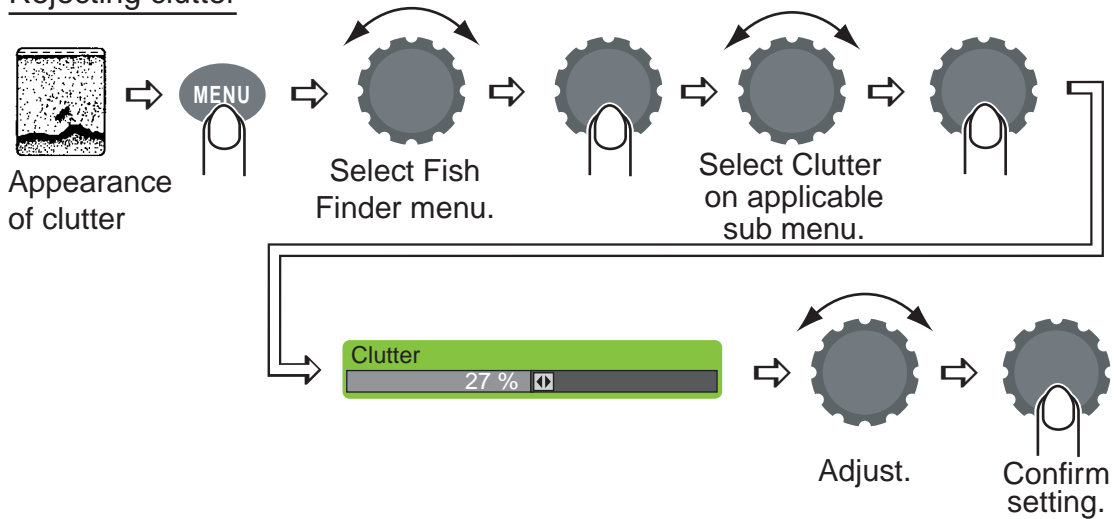
### Selecting a range



### Adjusting the gain



### Rejecting clutter

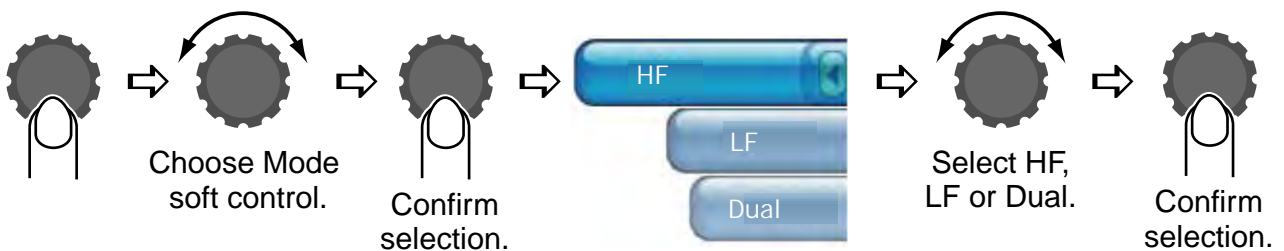


## Selecting operating frequency

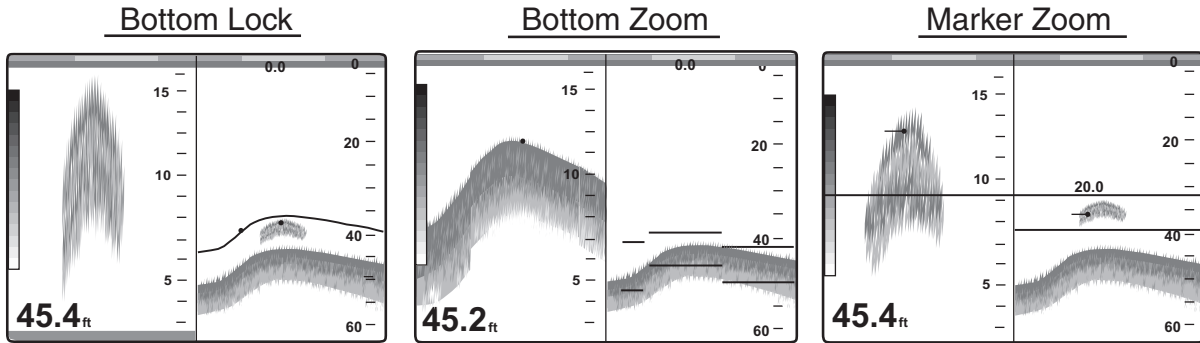
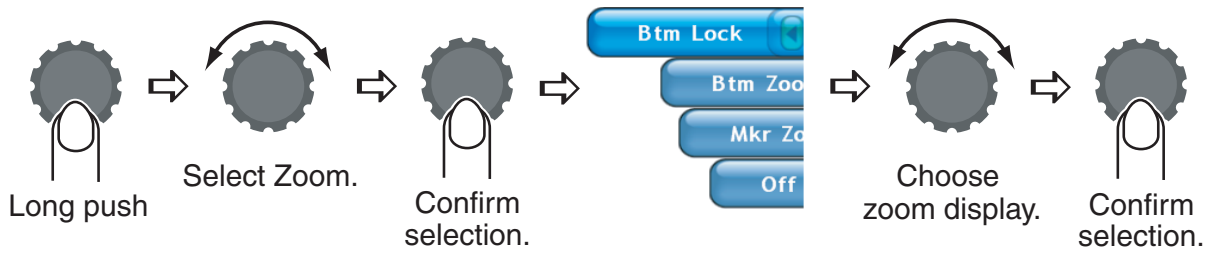
**Low frequency:** Use for general detection and judging bottom conditions.

**High frequency:** Use for detailed observation.

**Dual:** Both high and low frequencies.



# Zoom display



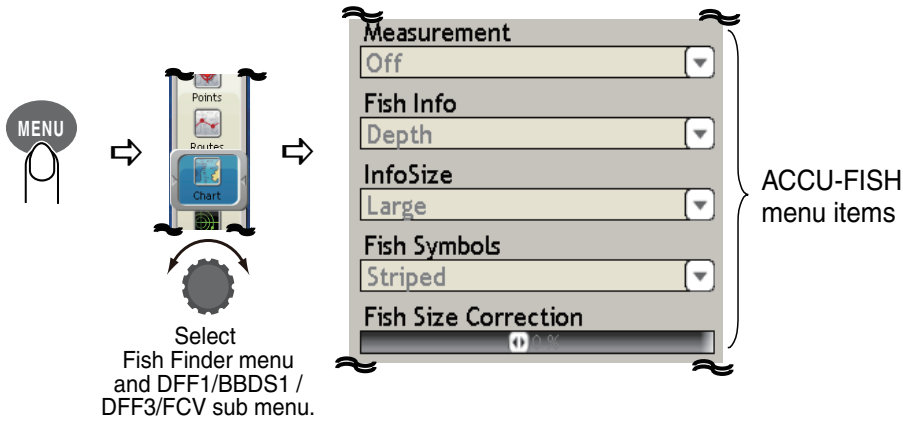
**Bottom Lock**  
For detecting bottom fish.

**Bottom Zoom**  
For discriminating bottom fish from bottom echo.  
Short bottom tail: Soft bottom  
Long bottom tail: Hard bottom

**Marker Zoom**  
For expanding a specific location.

# ACCU-FISH

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

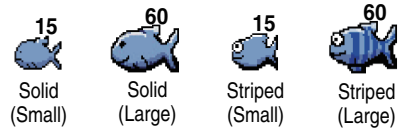


**Measurement:** Activate/Deactivate ACCU-FISH. 15

**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.