

This guide provides the basic operating procedures for this equipment. For detailed information, see the Operator's Manual, available on our homepage. Connection of sensors required.

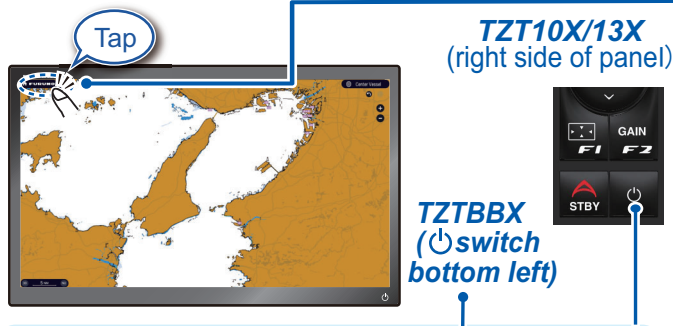
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The layout of the screen illustrations in this guide may differ depending on your system configuration and settings.

Operational Overview

Icon (home/displays), power switch operations

TZT16X/22X/24X



[FURUNO] icon
Displays the home page.

Display icons
(max. 16 on Home page)

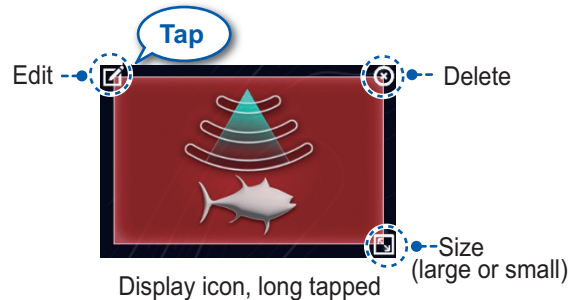
"eGuide" provides an abbreviated operator's guide.



Home page

How to edit a display icon

Long-tap a display icon to resize, delete or change its contents, then tap to confirm. You can also rearrange the icons by long-tapping and dragging.

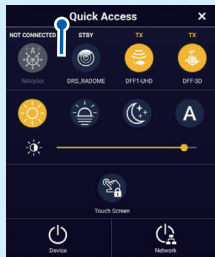


Power off

Device: Powers off this unit.
Network: Powers off all NavNet TZtouch series units in network.

Power switch

- Turns on power.
- Shows [Quick Access] window.

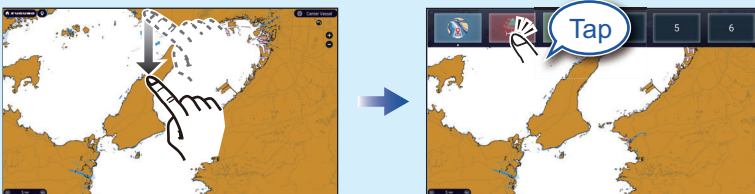


Brilliance, Hue

Hue: [Sun, Moon, A]
Brilliance: [Slider]

How to select a display

- Tap a display icon on the Home page (see illustration above).
- Tap a display icon on the Quick page.



Swipe downward from top of display

Quick page



Touchscreen operations

Tap



- Select an item on a menu.
- Tap the display or an object to show the corresponding Pop-up menu.

Drag, swipe



- Move the chart.
- Scroll the menu.
- Show Slide-out menu, Layers menu.

Pinch



Zoom in



Zoom out

- Zoom in, zoom out the chart plotter and weather displays.
- Change the range on the radar and fish finder displays.

Range buttons



Two finger (long) tap



Does the function assigned to [Two Finger (Long) Tap Function] in the [Settings] - [General] - [This Display] menu.

Two finger drag



Change the viewpoint position on the 3D display.

Menu operation

Pop-up menu

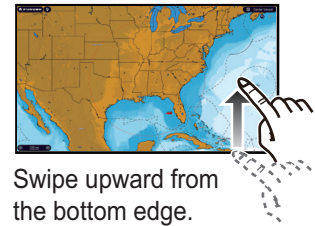


Tap screen (applicable point, object, etc.).



Tap the required function. (">" indicates additional options.)

Layers menu



Swipe upward from the bottom edge.



Layers menu



Tap
Tap the required function. (To switch between menus, swipe or tap applicable tab.)

Slide-out menu



Swipe leftward from the right edge.



Tap the required function.

Icon color and function state
Yellow: ON, White: OFF

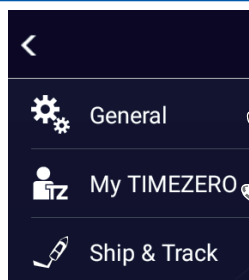
Settings menu



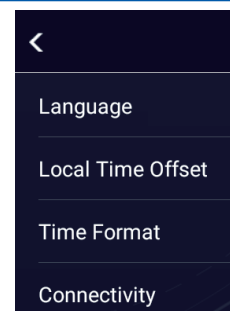
Tap the [FURUNO] icon.



Tap [Settings].

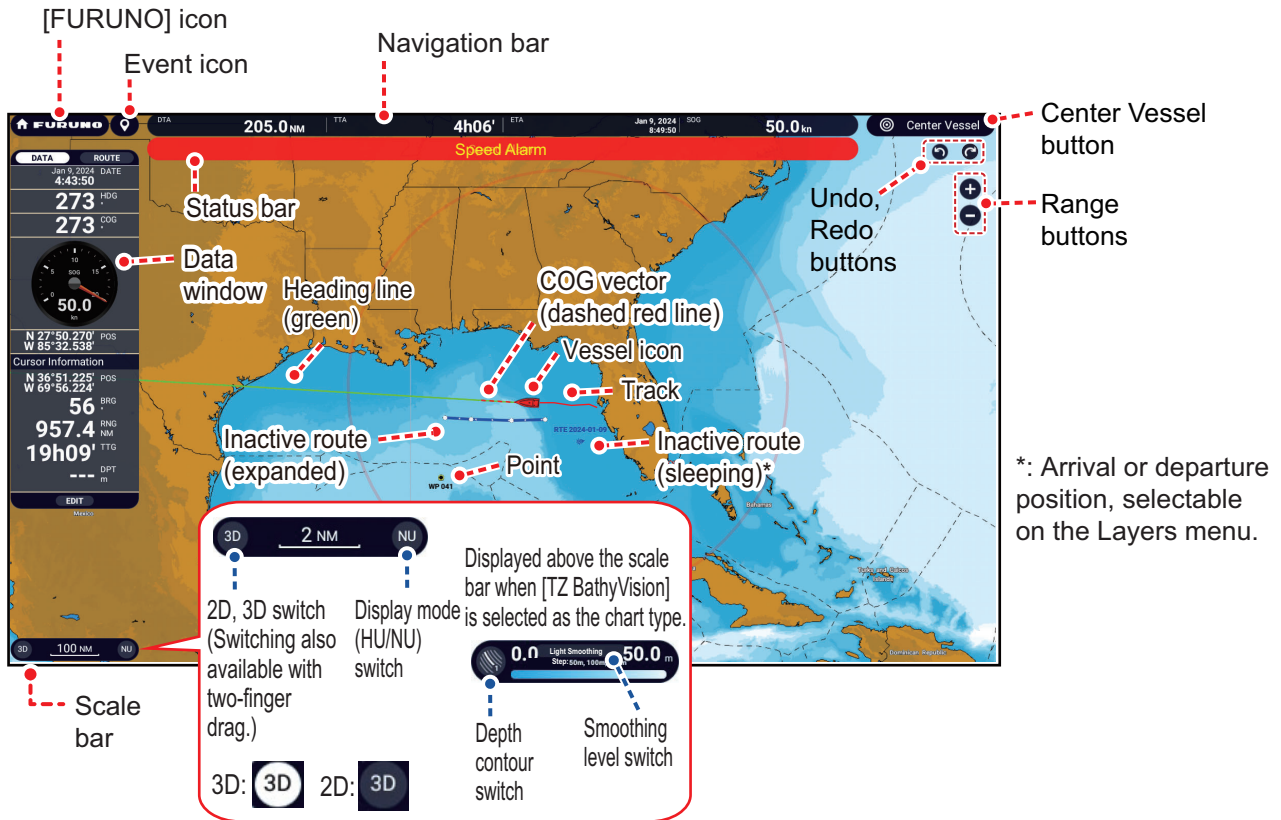


Drag to find required menu, then tap item.



Tap the required menu item.

Chart Plotter



Data Window

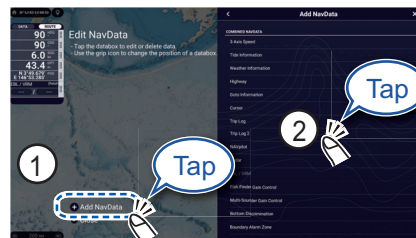
Swipe from the left edge of the screen rightward to show the Data window, which shows nav data at the left edge of the screen. To hide the window, swipe the box leftward or tap the [NavData] indication (yellow) in the Slide-out menu.

Data window settings



Tap [Edit] to show [Edit NavData] display.

To add nav data:



① Tap [+Add NavData]. ② Tap the data to add.

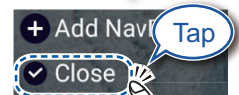
To remove a data box, or change the displayed data:



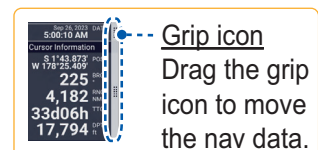
① Tap the nav data to remove or change. ② Remove nav data: Tap [Remove]. Change data: Tap data to display.



Tap [Change Type] to change the data display method, among Graphic (analog), Numeric (digital), and Graph.



Tap [Close] to finish.



Grip icon
Drag the grip icon to move the nav data.

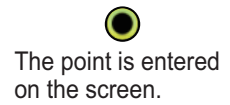
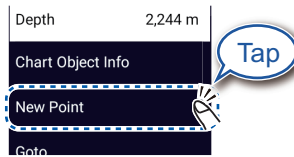
Points/Boundaries

Points can be entered on the chart plotter display (radar, fish finder and weather displays also) to mark important locations such as a good fishing spot. Point attributes (position, symbol type, color, etc.) are recorded to the Points list. Also, boundaries can be set at the position desired (net position, area to avoid, etc.).

How to enter a point



Tap where to enter a point.



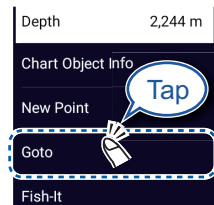
The point is entered on the screen.

How to set a point as destination

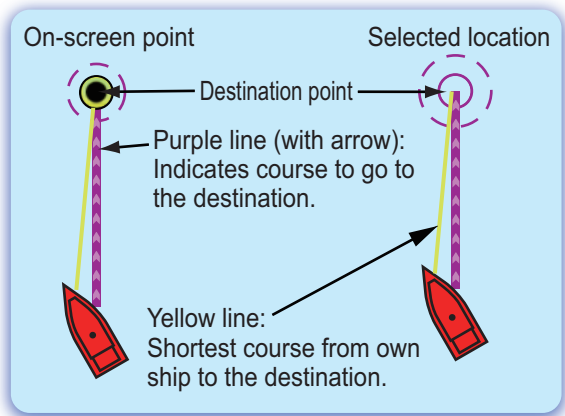
On-screen point



Tap a point or the location to set as destination.



If a point was tapped.



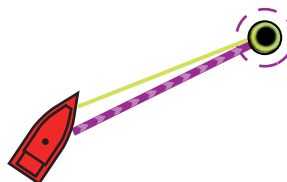
Points list



Sort the list by date, name, icon, color, range.



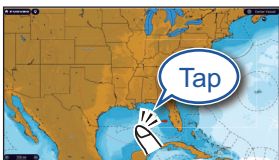
Tap the point to set as the destination.



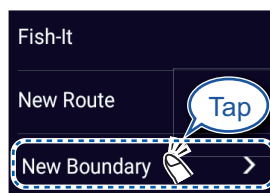
Notice

Note: [Find on Chart] puts the selected point at the screen center.

How to set a boundary



Tap the place where to set a boundary.



Tap the shape to use for the boundary.

[Area]/[Line]: Tap necessary points to complete the boundary, referring to "Route" on the next page.

[Circle]: Drag icons to adjust the size and position, and then tap [End Boundary].

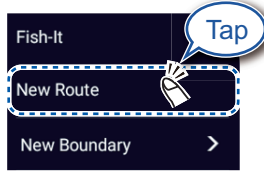
Routes

A route is comprised of a series of waypoints leading to a destination. Routes are saved to the Routes list.

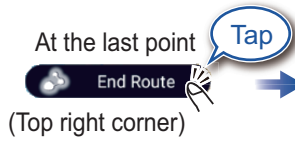
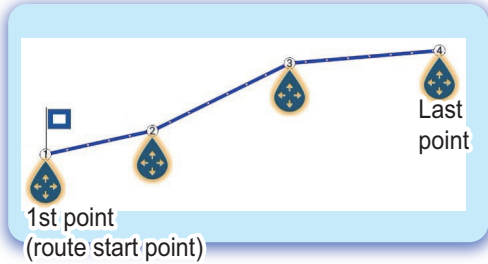
How to create a new route



Tap the first point for the route.



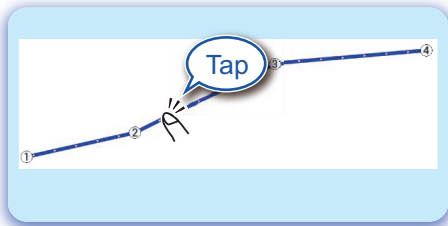
Select [Manual] or [AI Routing]*. Then tap the next point for the route. Repeat this operation to complete the route.
 *: For [AI Routing], if you tap two points, the start point and the final point, the system automatically creates a route that it deems navigable.



Enter a name for the route, then tap [✓].

How to follow a route

On-screen route



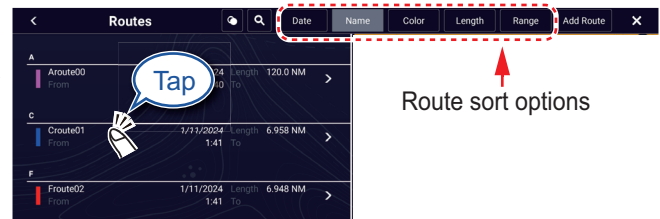
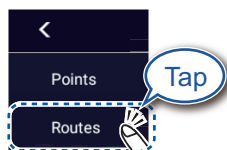
Tap a leg of the route.



Routes list

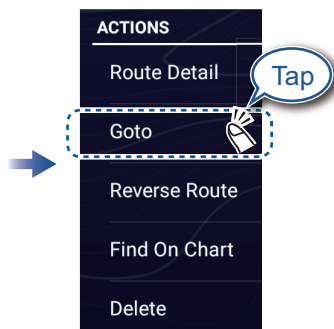


Home page

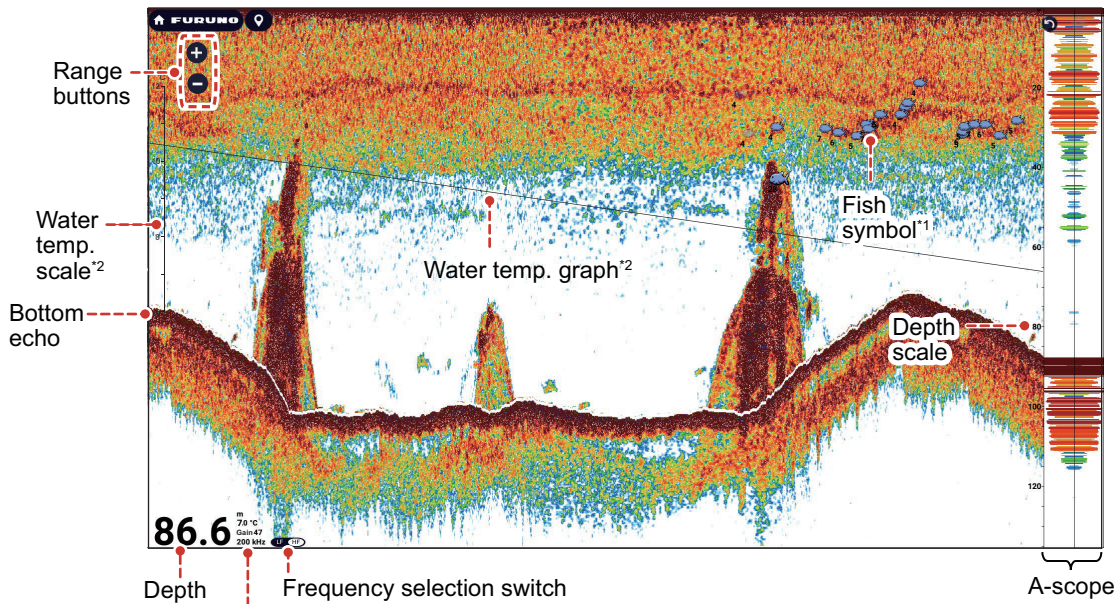


Route sort options

Tap the route to navigate.



Fish Finder



From top: *1: Requires ACCU-FISH™ compatible transducer on the network.
 Unit, Temp. *2: Requires water temperature sensor.
 Gain, Freq.

Note 1: Names of menu items may be different depending on the transducer connected on the network.

Note 2: TZT10X/13X/16X: Compatible with built-in or network fish finders.

TZT22X/24X/BBX: Compatible with network fish finders.

How to select a frequency

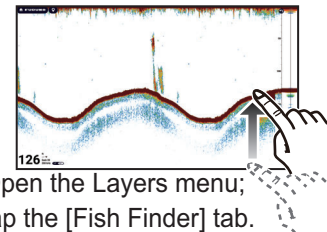
Low frequency: For “normal” use.
 High (Middle) frequency: For detailed observation of schools of fish.
 Dual frequency: Show both the low and high frequency pictures.

Single Freq. Tap

Dual Freq. Tap

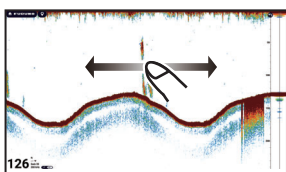
Frequency HF LF Tap (LF: Low Freq.)

Frequency HF LF Tap (HF: High Freq.)



Note
 [TX/STBY] toggles between TX and standby.

How to show past echoes (echo history)



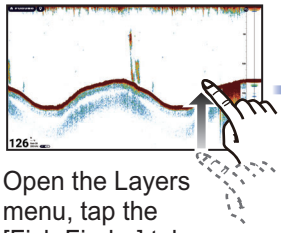
Swipe leftward or rightward to show past echoes.



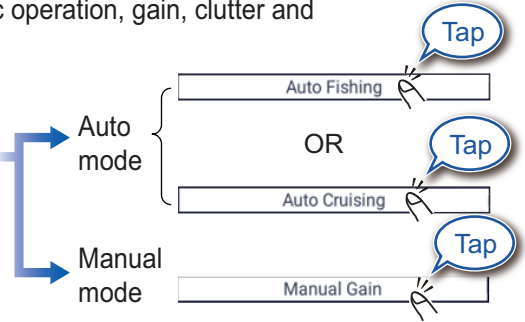
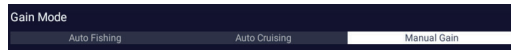
(Top right corner)
 Return to normal display.

How to select the operating mode

The fish finder is available in automatic and manual operation. For automatic operation, gain, clutter and TVG are automatically adjusted.

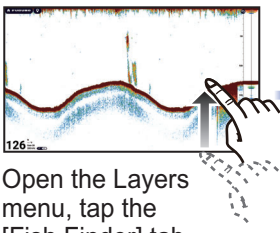


Open the Layers menu, tap the [Fish Finder] tab.

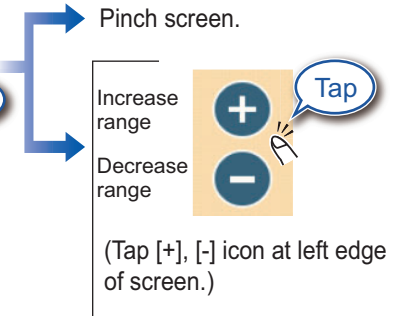


Manual mode

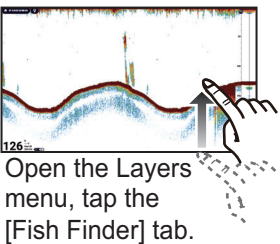
How to change the range



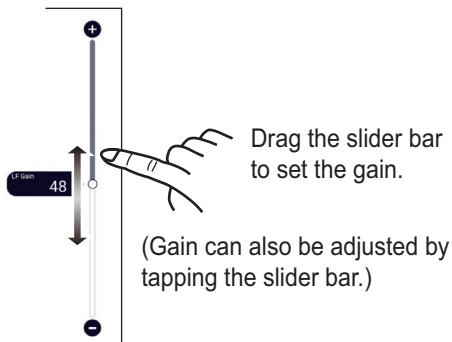
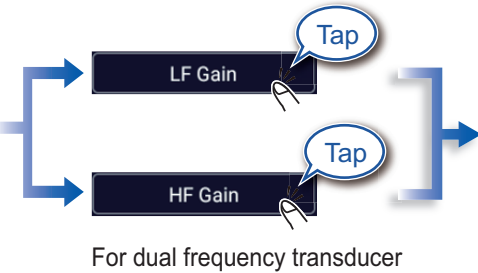
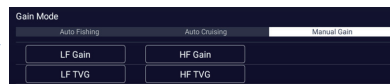
Open the Layers menu, tap the [Fish Finder] tab.



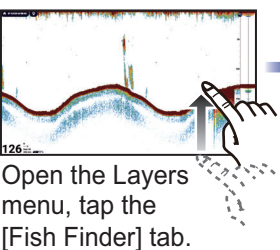
How to adjust the gain



Open the Layers menu, tap the [Fish Finder] tab.



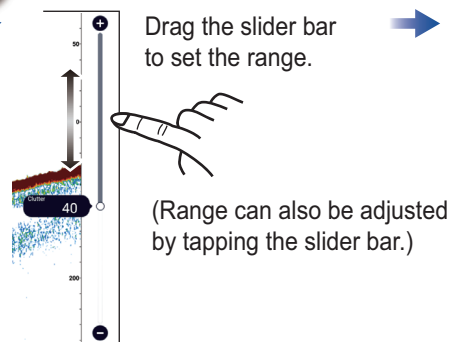
How to reduce clutter



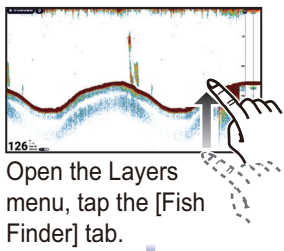
Open the Layers menu, tap the [Fish Finder] tab.






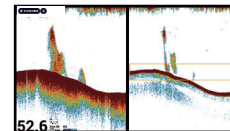
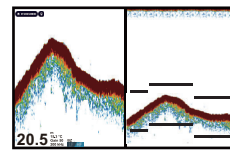
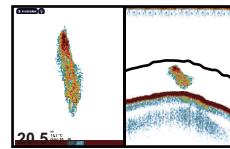
The larger the value, the more the clutter is reduced.



Zoom display

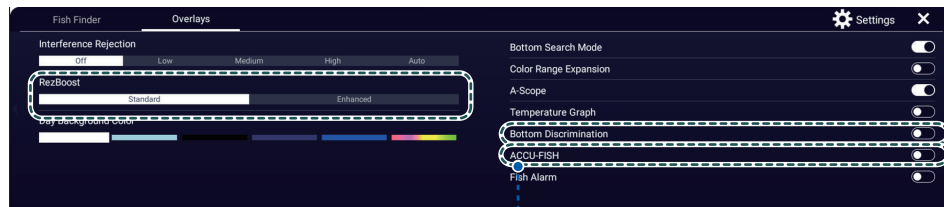
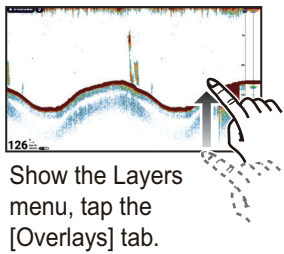


- 
Bot. Lock Bottom Lock
 Search for bottom fish.
- 
Bot. Zoom Bottom Zoom
 Find bottom contour and hardness.
- 
Mark. Zoom Marker Zoom
 Help determine the size of a school of fish in the middle layer.




- Short tail indicates soft bottom.
 - Long tail indicates hard bottom.


ACCU-FISH™/Bottom Discrimination




ACCU-FISH™

Detected fish can be marked with a fish symbol. (Requires ACCU-FISH™ capable transducer on the network.)

ACCU-FISH 

Fish symbol 


Fish size or depth 

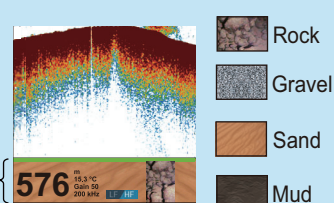
Notice

You can select fish symbol type, and fish size or depth indication from the menu - Home page → [Settings] → [Fish Finder] → [ACCU-FISH].

Bottom Discrimination

Show probable bottom hardness. (Requires bottom discrimination capable transducer on the network.)

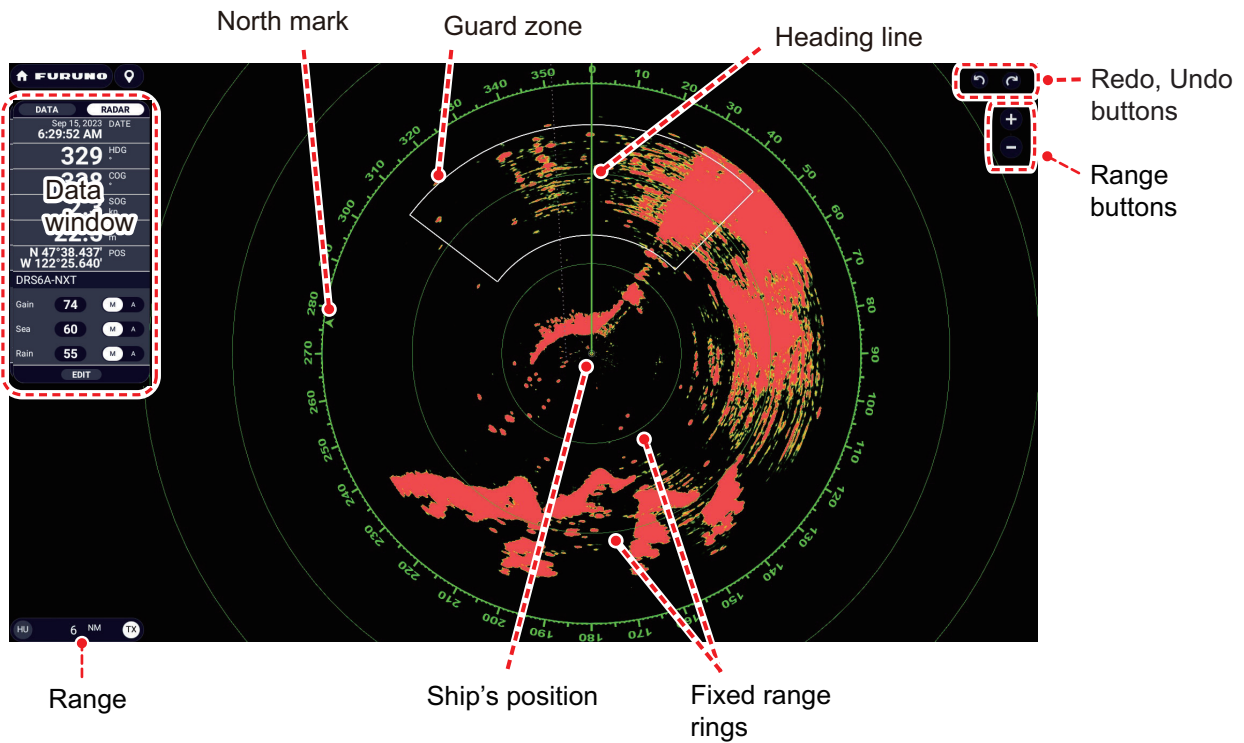
Bottom Discrimination 

Bottom discrimination display 

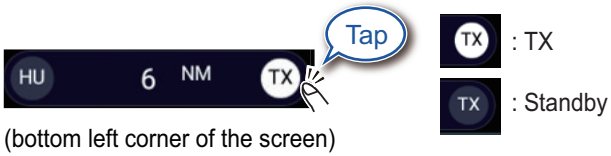
The most probable bottom material.

Note: ACCU-FISH™ and Bottom Discrimination should not be selected to "ON" at the same time.

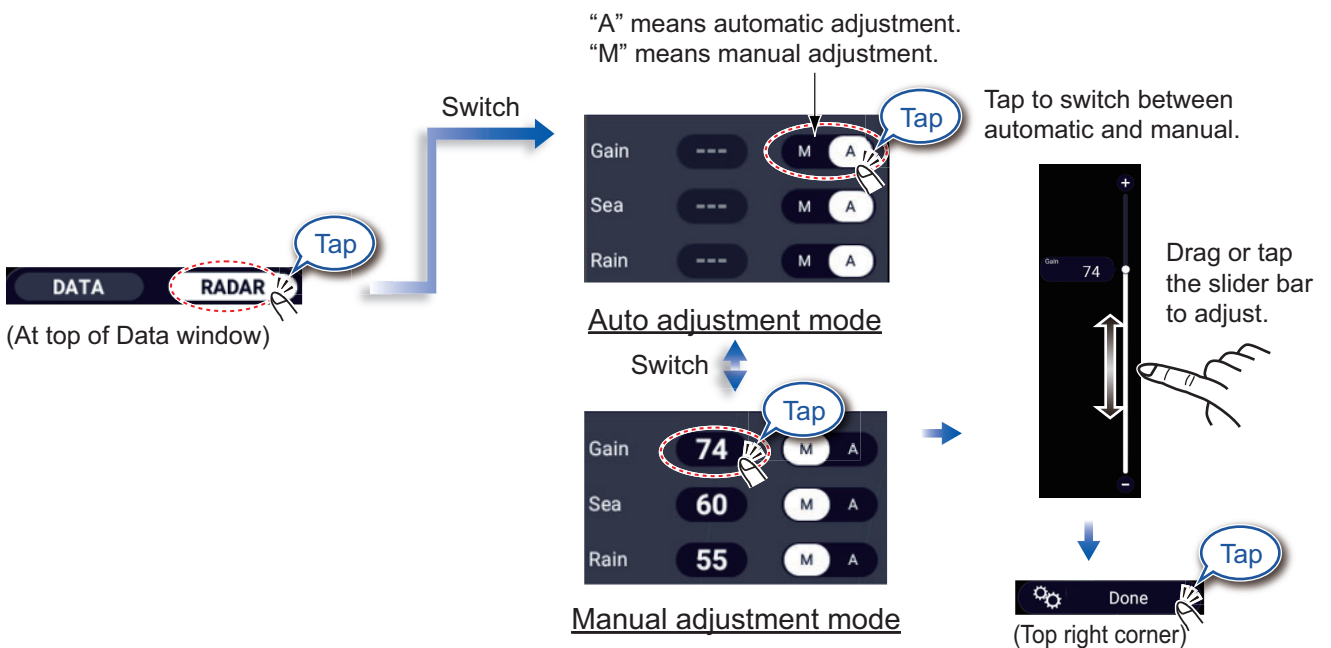
Radar



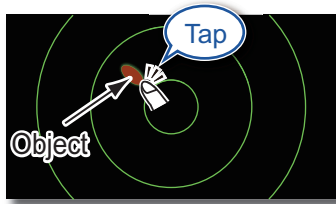
How to switch between standby and TX



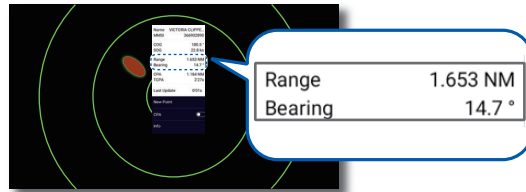
How to adjust the gain / sea clutter / rain clutter



How to measure the range, bearing from own ship to an object

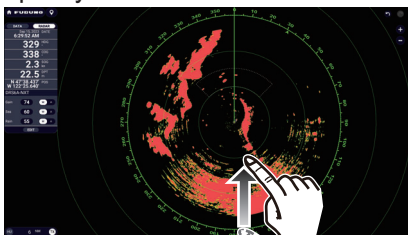


Tap an object to show its range and bearing from own ship.

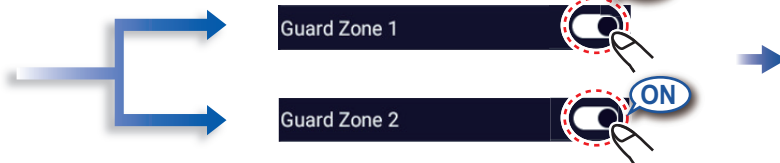


How to set a guard zone

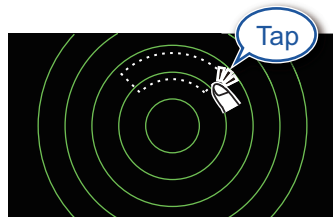
A guard zone alerts you (with aural and visual alarms) when an object (ship, island, reef, etc.) enters the area you specify.



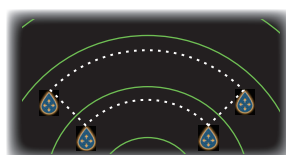
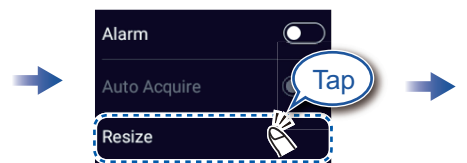
Open the Layers menu, tap the [Overlays] tab.



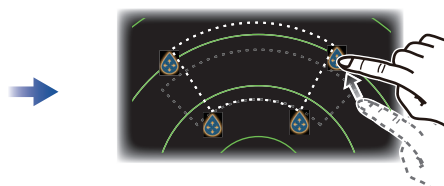
The guard zone appears in dashed lines.



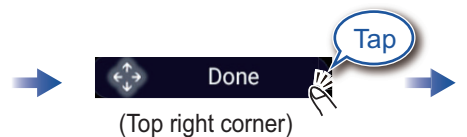
Tap dashed line on guard zone.



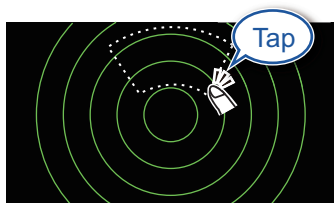
An icon appears at each corner of the guard zone.



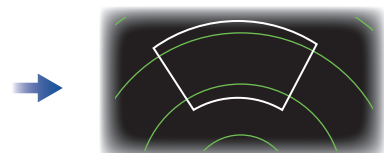
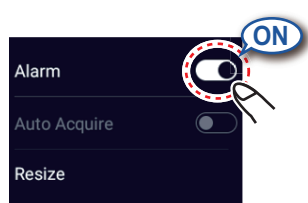
Drag the icons to set guard zone.



(Top right corner)



Tap the guard zone again.

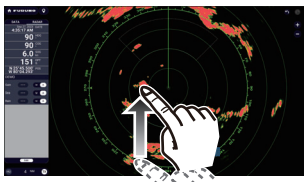


The dashed lines change to solid lines, indicating the guard zone is active.

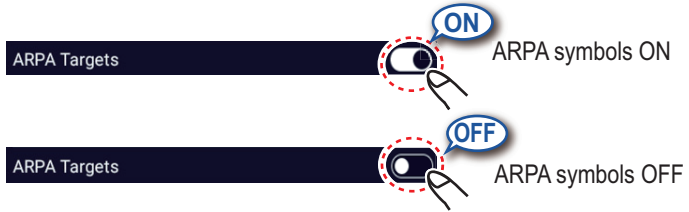
ARPA Operation

ARPA is an anti-collision aid that tracks the movement of other ships to help prevent collision. ARPA not only tracks other ships but also provides their navigation data. Targets can be acquired manually, automatically, or both automatically and manually.

How to show, hide ARPA symbols



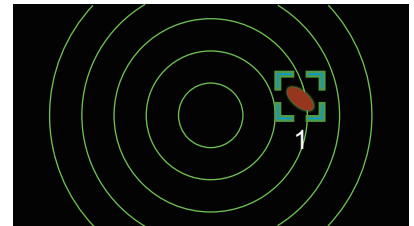
Open the Layers menu, tap the [Overlays] tab.



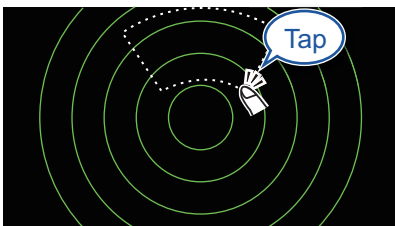
How to manually acquire a target



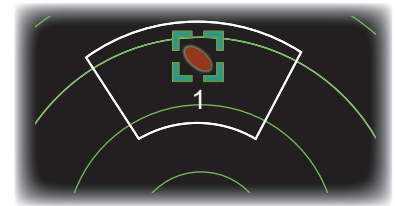
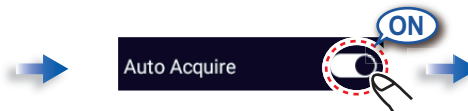
Tap the target to acquire.



How to automatically acquire a target



Set a guard zone, then tap the guard zone.

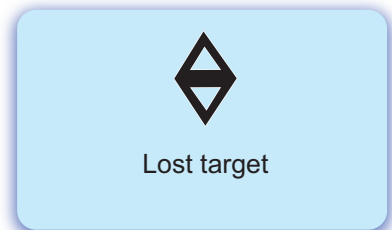
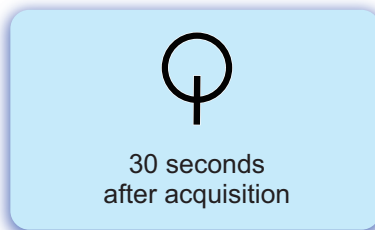
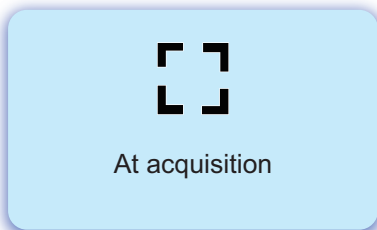


The dashed lines change to solid lines, indicating the guard zone is active.

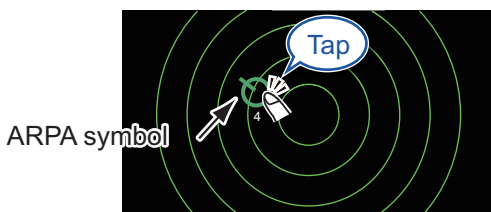
Note

When [Full Auto Tracking Sea Condition] is activated from the [Radar] tab in the Layers menu, targets within 3 NM from your ship are automatically acquired when connected to a DRS-NXT series radar.

ARPA symbols

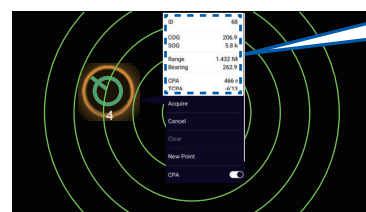


How to display target data



ARPA symbol

Tap an ARPA target to show its data.



ID	68
COG	206.9 °
SOG	5.8 km
Range	1.432 NM
Bearing	262.9 °
CPA	466 m
TCPA	-6'13s

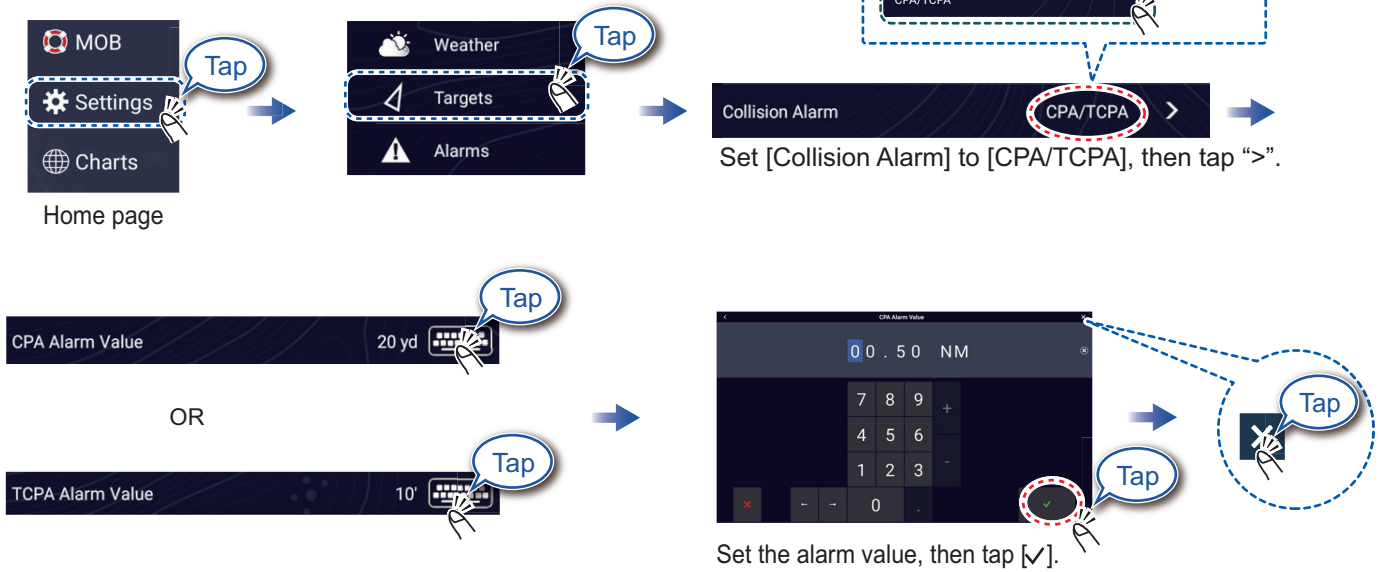
CPA/TCPA alarm

The CPA/TCPA alarm releases an aural alarm and a visual alarm (message in Status bar) when both the CPA and TCPA of a tracked target are equal to or lower than the CPA/TCPA alarm setting.

CPA: Closest point of approach

TCPA: Time to closest point of approach

How to set the CPA/TCPA alarm



How to acknowledge the CPA/TCPA alarm

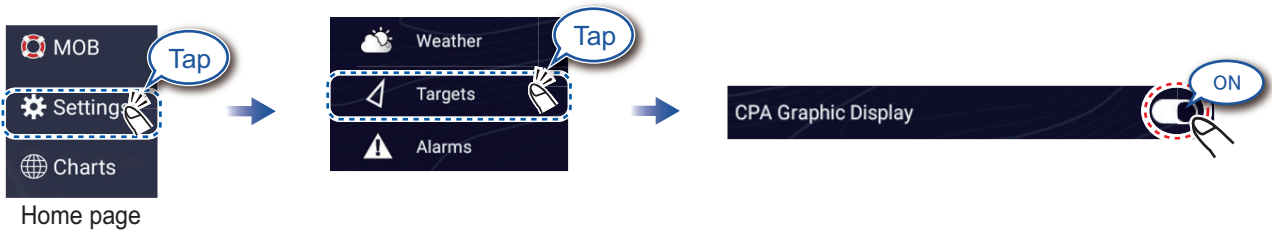
Tap the alarm message (top of screen) to acknowledge the alarm and stop the aural alarm.



CPA Line

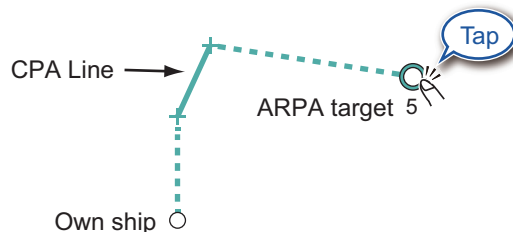
The CPA Line feature gives you a visual line that depicts the closest point of approach to a selected ARPA target. To use this feature, own ship position and heading data are required.

How to enable the CPA Line feature



How to show the CPA Line

Tap an ARPA target (condition: target's CPA/TCPA must be a positive value) on the radar or chart plotter display.



AIS (Automatic Identification System)

How to show or hide AIS target symbols



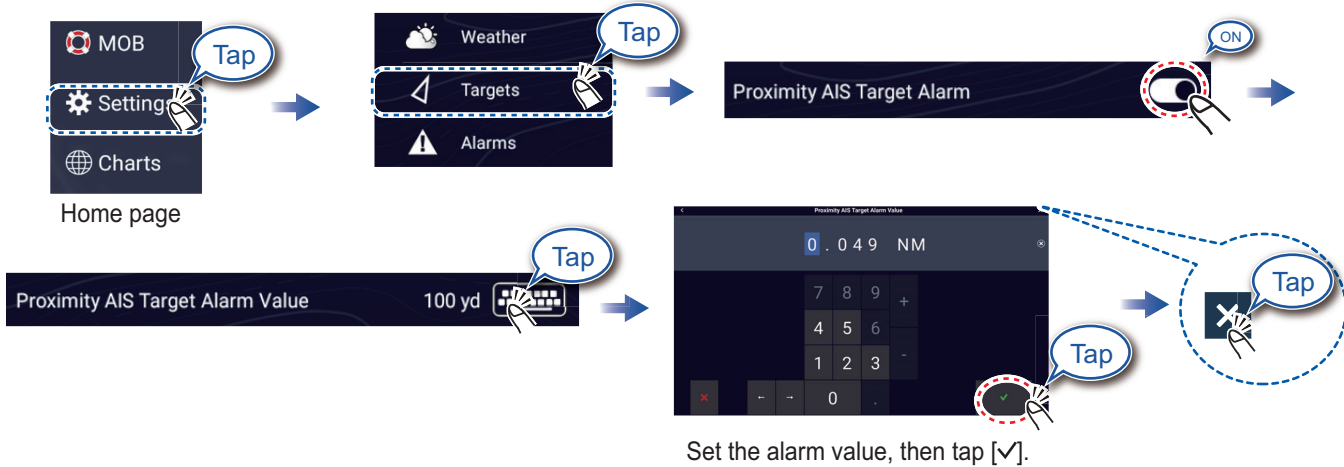
AIS target symbols

	Class A AIS	Class B AIS	BFT* AIS
Activated target	SOG and COG vector Color: Blue	SOG and COG vector Color: Green	SOG and COG vector Color: Blue (filled)
Dangerous target	Color: Red		
Lost target	Color - AIS target: Blue - Cross: Red	Color - AIS target: Green - Cross: Red	Color - AIS target: Blue (filled) - Cross: Red

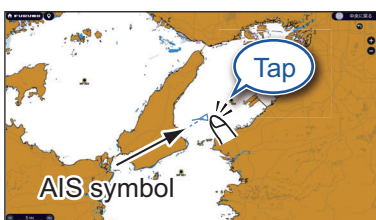
*: Blue Force Tracking

Proximity AIS target alarm

The proximity AIS target alarm releases aural and visual alarms when the distance between own ship and an AIS target is near the alarm value.



How to show AIS target data



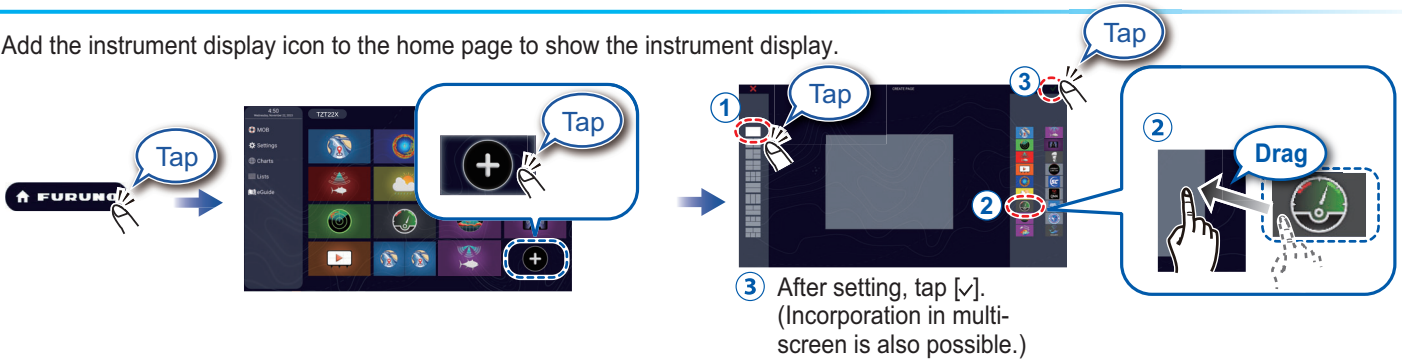
Name	FÜRÜNÖ NAVNET
MMSI	368007000
COG	210.9 °
SOG	5.7 kn
Range	2,244 NM
Bearing	214.3 °
CPA	1,866 NM
TCPA	-3d13h
Last Update	0'22s

Instrument Display

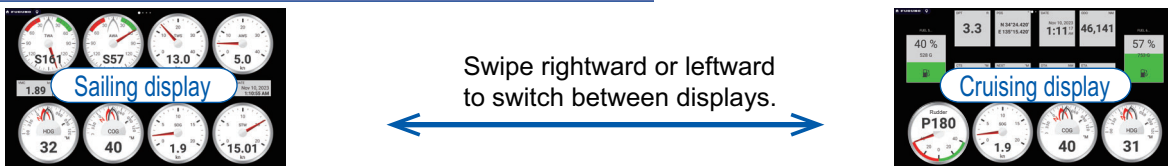
With connection of appropriate sensors, the instrument display shows various navigation data.

How to enable the instrument display

Add the instrument display icon to the home page to show the instrument display.



How to switch instrument displays (ex. full display)



How to edit the instrument display



Tap the instrument display, then select [Edit Page] on the Pop-up menu.

Edit mode



A white line surrounds each indication.

In the edit mode, you can remove, change, add, rearrange indications.

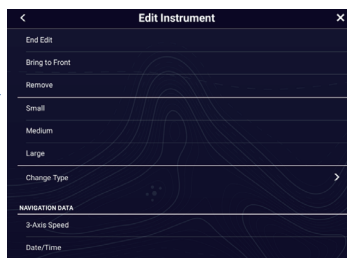
To end the edit mode

Tap the screen, then select [End Edit] on the Pop-up menu.

How to remove or change an indication



In the edit mode, select the indication to remove or change.

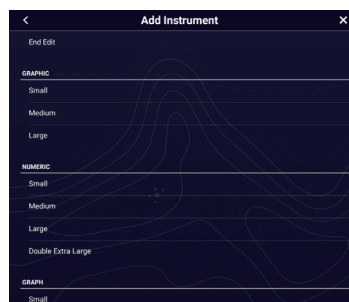


- Remove indication: Tap [Remove].
 - Change size: Tap [Small], [Medium], [Large], [Double Extra Large]*.
 - Change type: Tap [Change Type], then tap desired size.
 - Change indication: Tap indication in [NAVIGATION DATA], [ROUTE INFORMATION], [WIND AND WEATHER], and [ENGINE].
- *: Numeric displays only

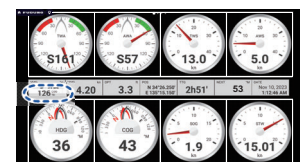
How to add an indication



In the edit mode, tap a location not occupied by an instrument display.



Select a size in desired category.



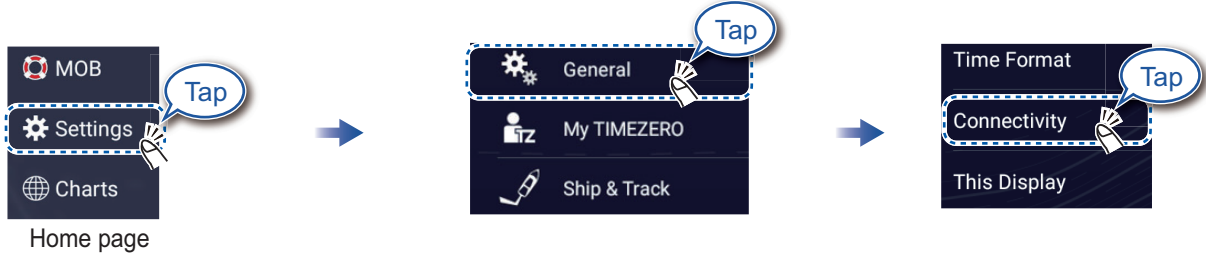
Tap added instrument display to change displayed data (see above).

Wireless LAN Settings

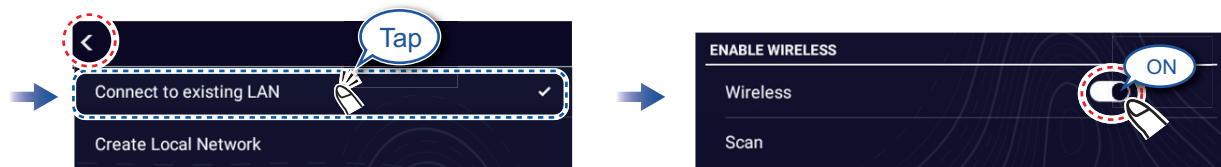
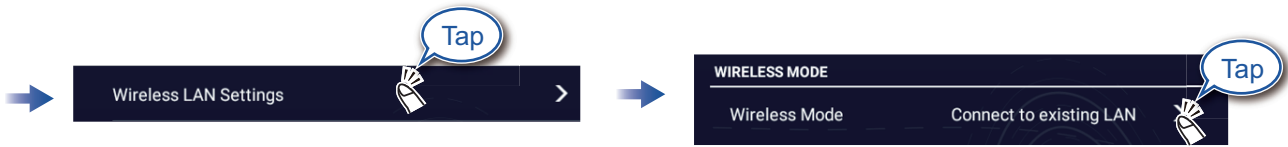
You can connect to the internet with the wireless LAN signal to download weather information, update the software, and connect to an iPhone, iPod, iPad, or Android™ device, to operate and monitor a NavNet TZtouch XL device.

How to connect to an existing LAN

Connect to the existing LAN to download weather data or update the software. For smartphone and tablet settings, refer to appropriate manuals.



Home page

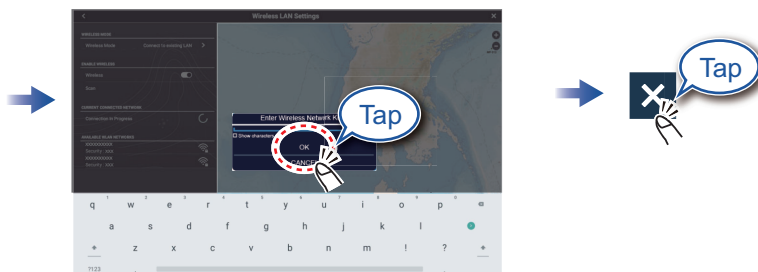


Tap [Connect to existing LAN].

Note: If no network appears, tap [Scan].



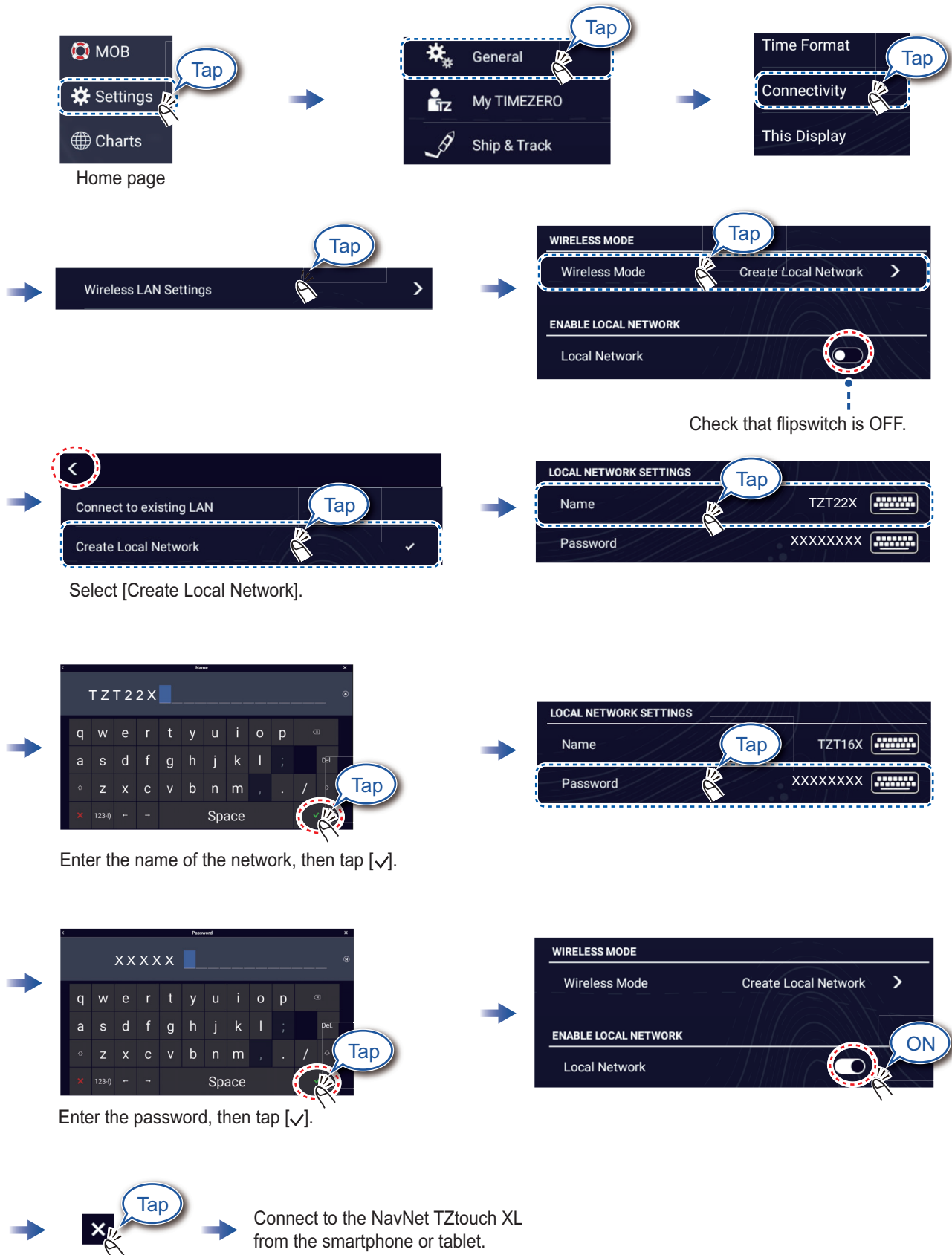
Tap network required.



Enter the password, then tap [OK].

How to create a local wireless network

Create a local wireless network to enable operation, monitoring of the TZTtouch XL from a smartphone or tablet.



PSTI Statement of Compliance

We **FURUNO ELECTRIC CO., LTD.**

(Name of manufacturer of the product)

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

(Address of manufacturer of the product)

declare under our sole responsibility that the product

**MULTI FUNCTION DISPLAY,
TZT10X, TZT13X, TZT16X, TZT22X, TZT24X**

(Product type, batch)

May / 31 / 2029

(Support period for the product)

https://www.furuno.co.jp/en/csr/sociality/customer/product_security.html

(Weblink for latest information and contact to report to the manufacturer security issues)

to which this declaration relates conforms to the following standard(s) or other normative document(s)

Product Security and Telecommunications Infrastructure Act 2022

Product Security and Telecommunications Infrastructure (Security Requirements for
Relevant Connectable Products) Regulations 2023 Schedule 1

On behalf of Furuno Electric Co., Ltd.

Nishinomiya City, Japan
24 May 2024

(Place and date of issue)

Akihiko Kanechika
Department General Manager
Quality Assurance Department

(Signature, name and function of the signatory)



PSTI Statement of Compliance

We FURUNO ELECTRIC CO., LTD.

(Name of manufacturer of the product)

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

(Address of manufacturer of the product)

declare under our sole responsibility that the product

MULTI FUNCTION DISPLAY,
TZTBBX

(Product type, batch)

MAY / 31 / 2029

(Support period for the product)

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On behalf of Furuno Electric Co., Ltd.

Nishinomiya City, Japan
6 June 2024

(Place and date of issue)

Akihiko Kanechika
Department General Manager
Quality Assurance Department

(Signature, name and function of the signatory)



 **FURUNO ELECTRIC CO., LTD.**

