

This guide provides the basic operating procedures for this equipment. For detailed information, see the Operator's Manual on the WEB site. You can get the latest version of the manual by accessing the quick response code at the bottom of this page. Connection of sensors required.

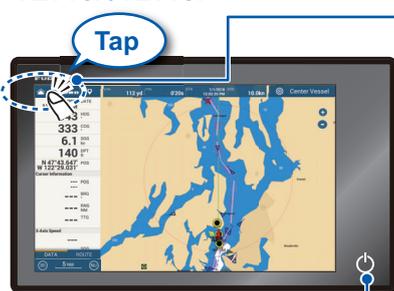
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The screenshots used in this guide were mainly taken from the TZT19F.

Operational Overview

Icon (home/displays), power switch operations

TZT16F/TZT19F



Tap

TZT9F/
TZT12F
(Right side of the Panel)



FURUNO icon
Displays the
home screen.

Display icons
(max. 16 on home screen)



"eGuide" provides
an abbreviated
operator's guide.

Home screen

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.



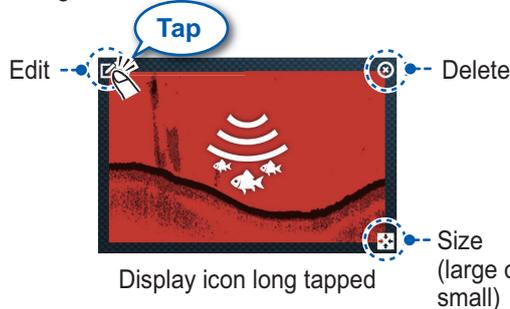
Brilliance, Hue

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



How to edit a display icon

Long tap a display icon to edit, delete, resize, or change its location.



Display icon long tapped

Size
(large or small)

How to select a display

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



Swipe downward from top of display.



Quick page

Operator's Manual
Download Link



Touchscreen operations

Tap



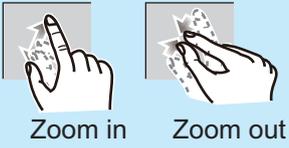
- Select an item on a menu.
- Tap the display or an object to show the corresponding pop-up menu.

Drag, swipe



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

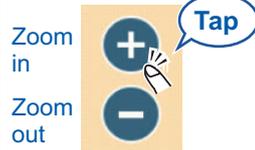
Pinch



Zoom in Zoom out

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

Scale slider, Range slider



Zoom in
Zoom out

Two finger (long) tap



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

Two finger drag



Change the viewpoint position on the 3D display.

Menu operation

Pop-up menu



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

Pop-up menu



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

Layers menu



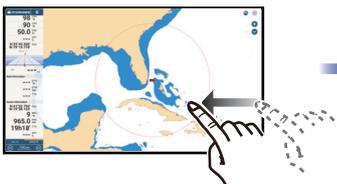
Swipe upward from the bottom edge.

Layers menu



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

Slide-out menu



Swipe leftward from the right edge.

Slide-out menu



Tap the required function.
Icon color and function state
Yellow: ON, White: OFF

Settings menu



Tap the FURUNO icon.



Tap [Settings].

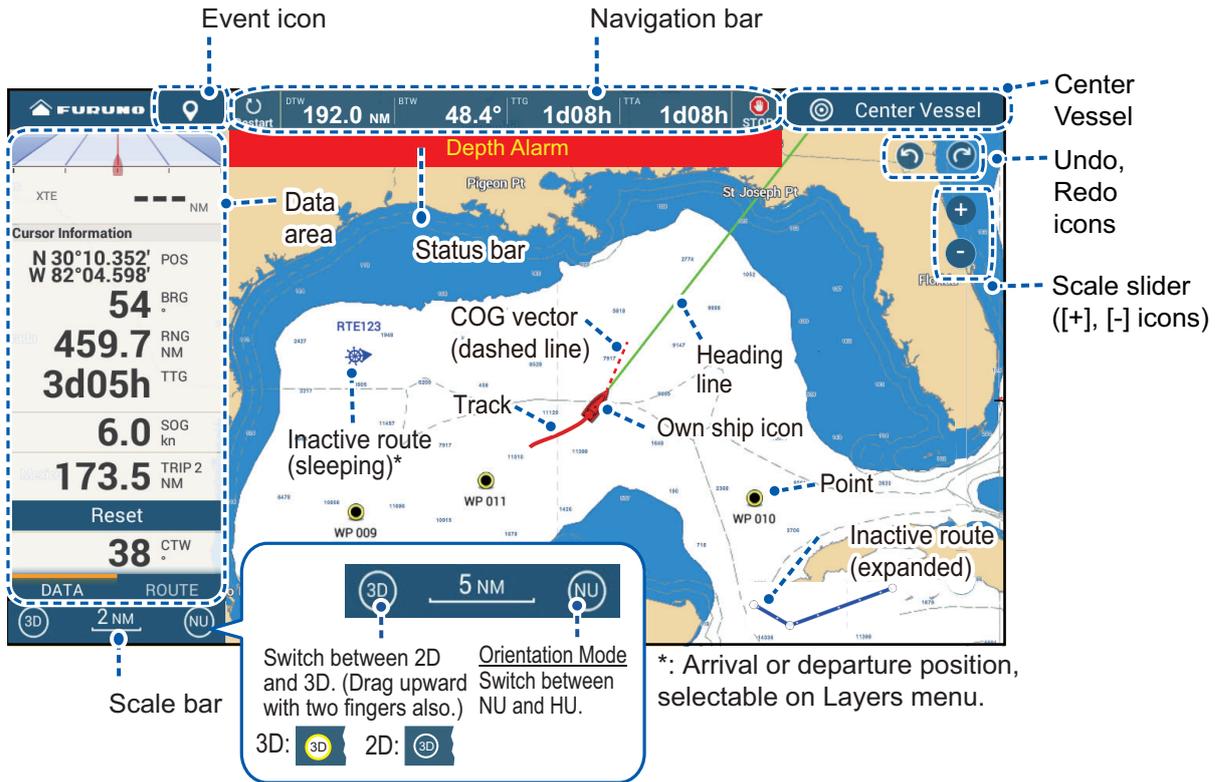


Drag to find required menu, then tap item.



Tap the required menu item.

Chart Plotter



Data Area (Data Box)

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

Data box settings



Long tap the data box to show [Edit NavData] display.

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



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

To add a data box;



- 1 Tap empty space on the data area or [+Add NavData].
- 2 Tap a data to add.

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



Tap [Close] to finish.



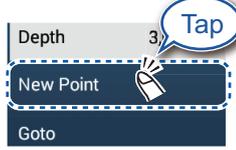
Points/boundaries

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.



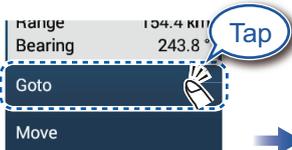
The point is entered on the screen.

How to set a point as destination

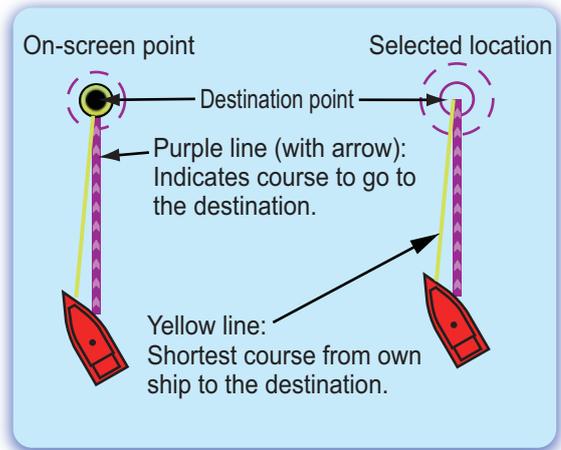
On-screen point



Tap a point or the location to set as destination.



If a point was tapped.



Points list



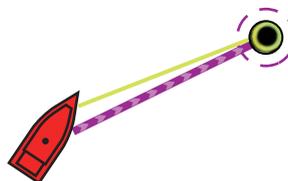
Tap [Lists] on the home screen.



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



Tap the point to set as the destination.



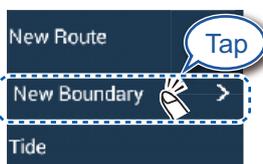
Notice

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

How to set a boundary



Tap the position 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.

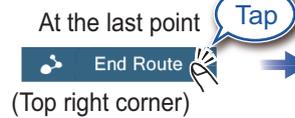
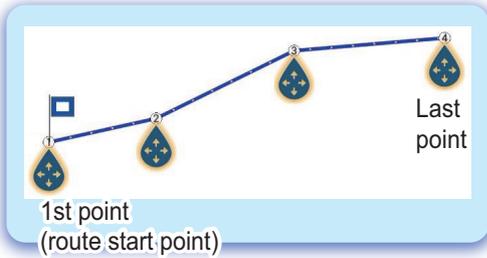
How to create a new route



Tap the first point for the route.



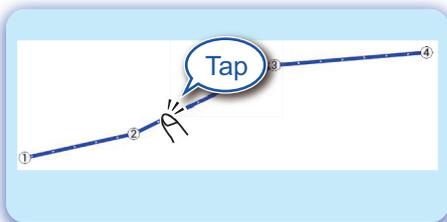
Tap the next point for the route. Repeat to enter all points for the route.



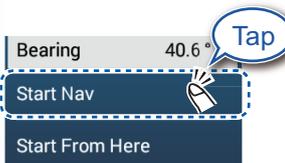
Enter a name for the route, then tap [✓].

How to follow a route

On-screen route



Tap a leg of the route.



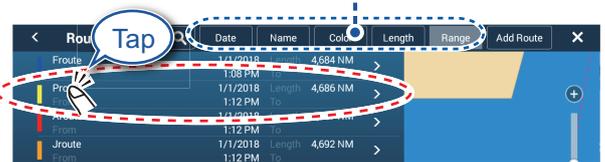
Routes list



Home screen



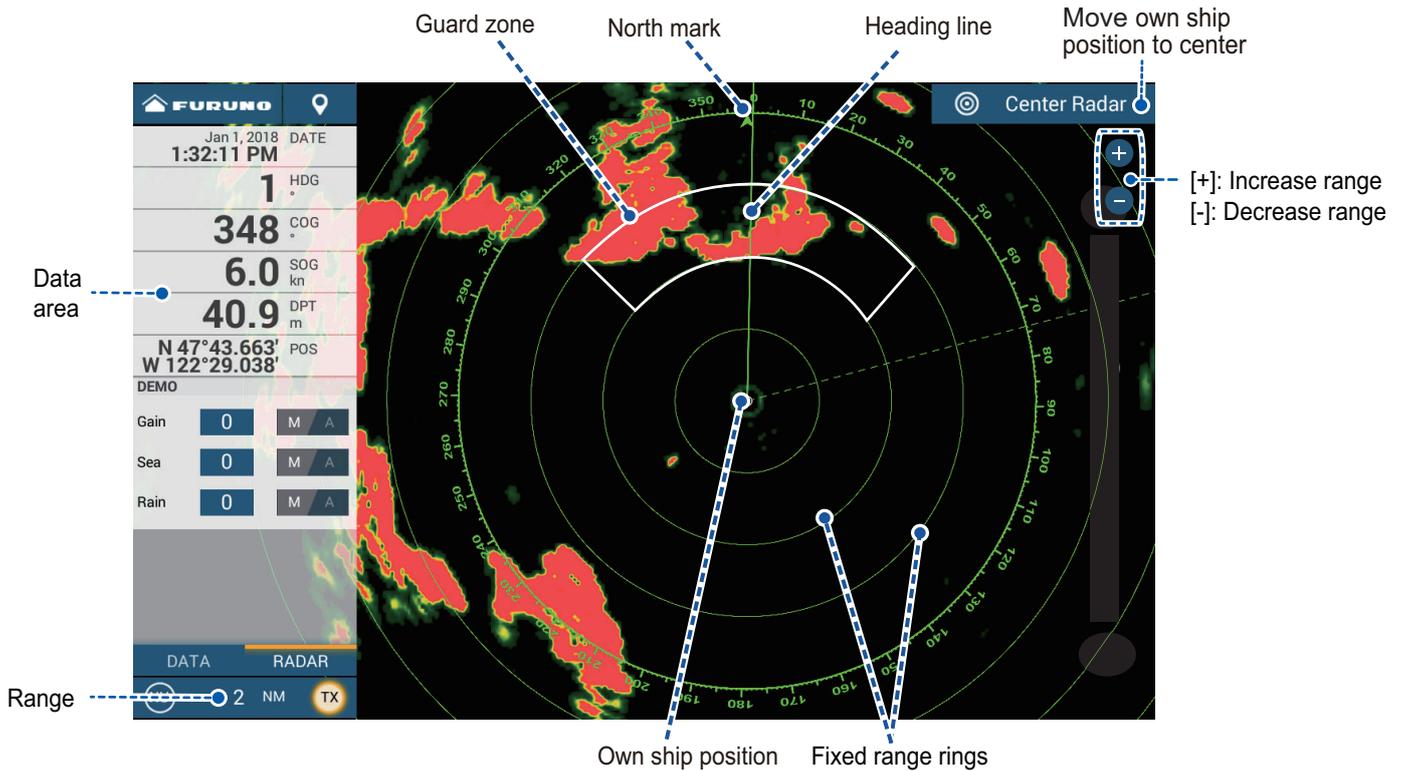
Sort list by date, name, color, length, or range.



Tap the route to use.



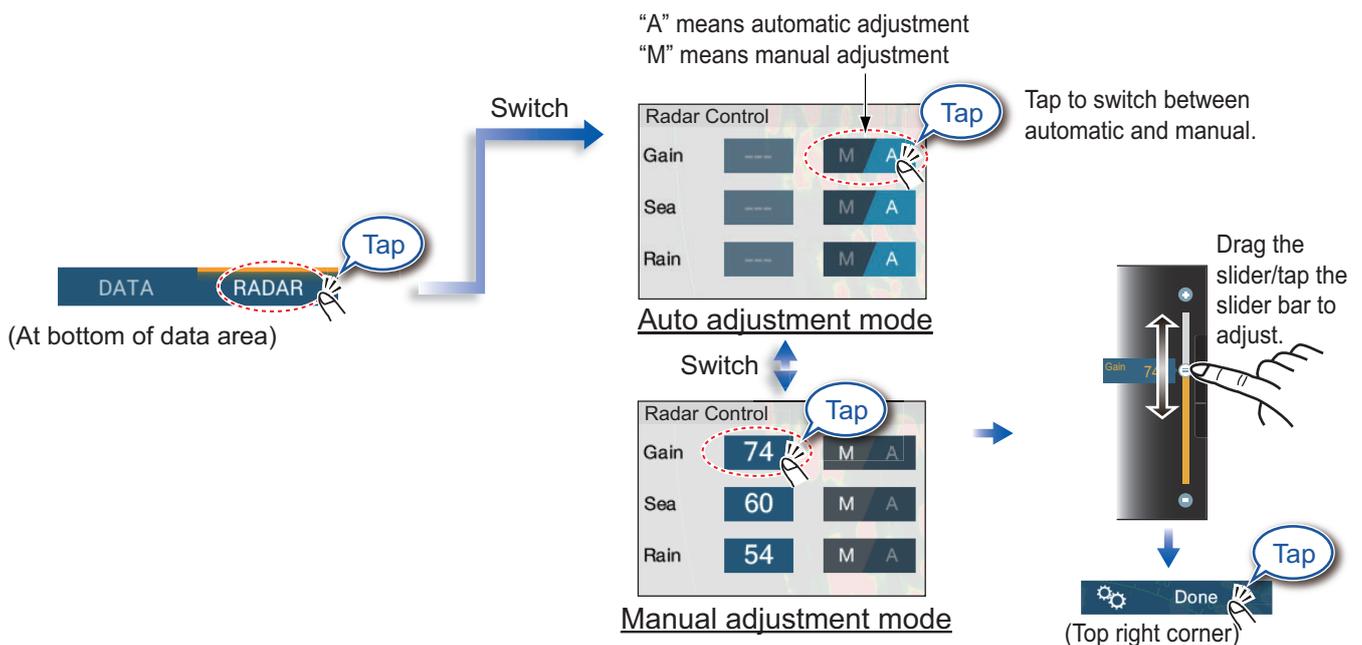
Radar



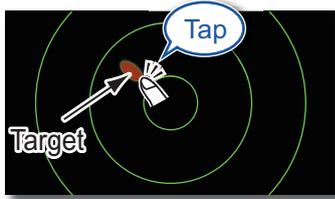
How to switch between standby and TX



How to adjust the gain / sea clutter / rain clutter



How to measure the range, bearing from own ship to a target

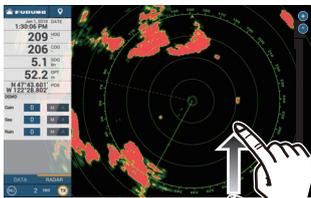


Tap a target to show its range and bearing from own ship.

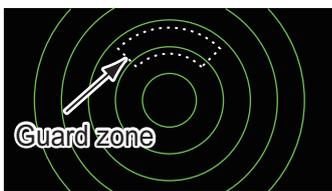
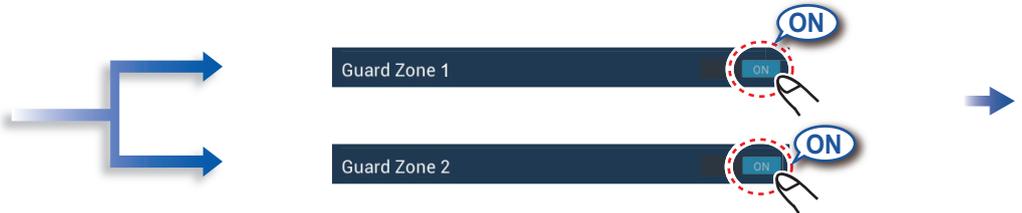


How to set a guard zone

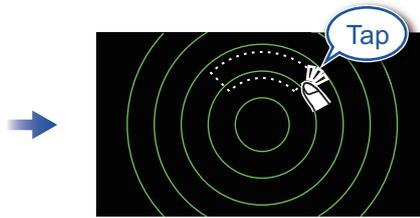
A guard zone alerts you (with aural and visual alarms) when a radar target enters the area you specify.



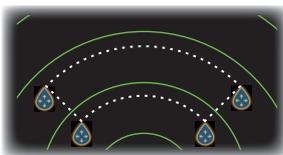
Open the Layers menu, tap the [Overlays] tab.



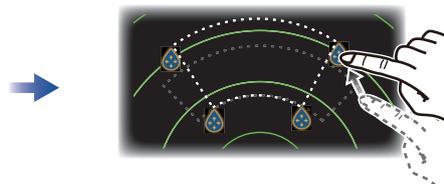
The guard zone appears in dashed lines.



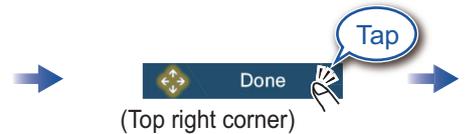
Tap dashed line on guard zone.



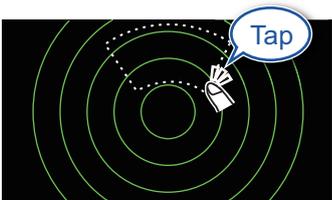
An icon appears at each corner of the guard zone.



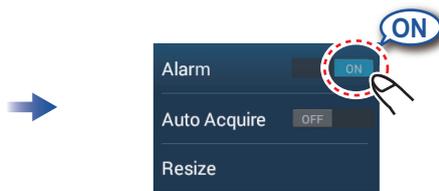
Drag the icons to set guard zone.



(Top right corner)



Tap the guard zone again.

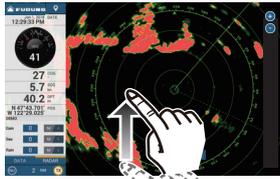


The dashed lines change to solid lines, indicating the guard zone is active.

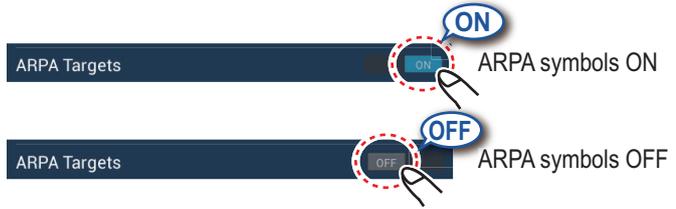
ARPA Operation

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.

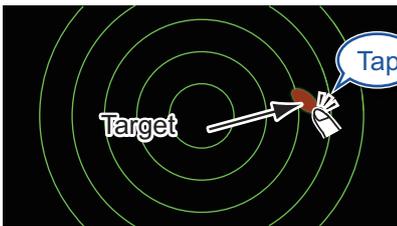
How to show, hide ARPA symbols



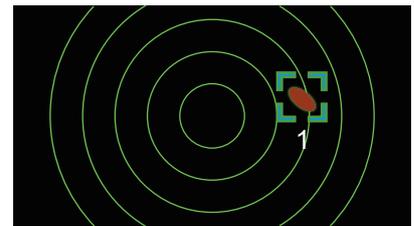
Open the Layers menu, tap the [Overlays] tab.



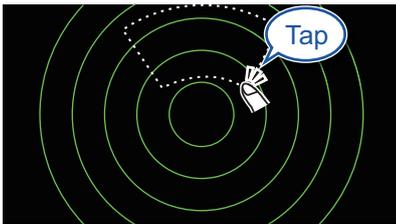
How to manually acquire a target



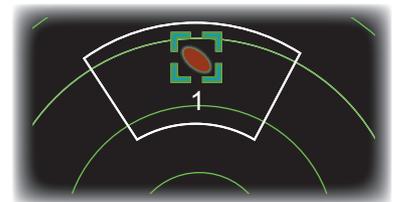
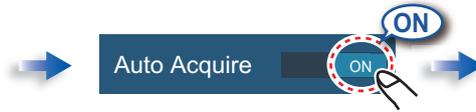
Tap the target to acquire.



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.

ARPA symbols



At acquisition

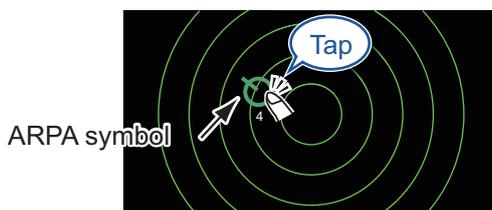


30 seconds after acquisition



Lost target

How to display target data



ARPA symbol

Tap an ARPA target to show its data.



ID	2
COG	340.1°
SOG	0.8 kn
Range	4.278 km
Bearing	82.5°
CPA	4.189 km
TCPA	-2h21'

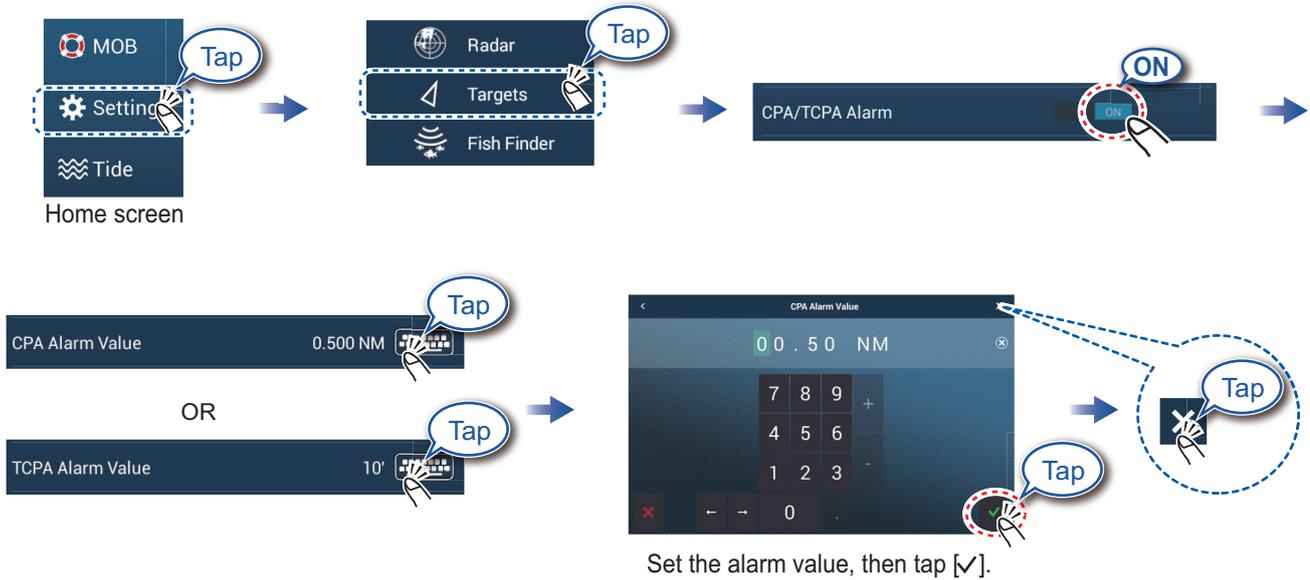
CPA/TCPA alarm

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

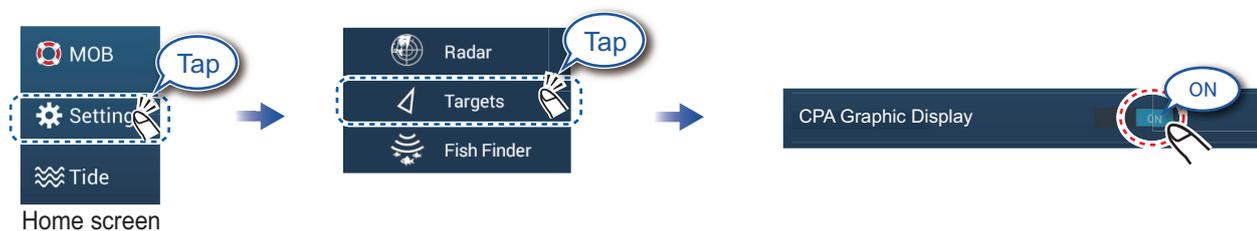
Tap the alarm message (top of screen) to acknowledge the alarm and stop the aural alarm.



CPA Line

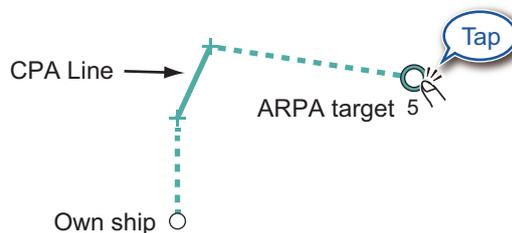
The CPA Line feature gives you a visual line that depicts the closest point of approach to a selected ARPA target. To use this feature, own ship position and heading data are required.

How to enable the CPA Line feature



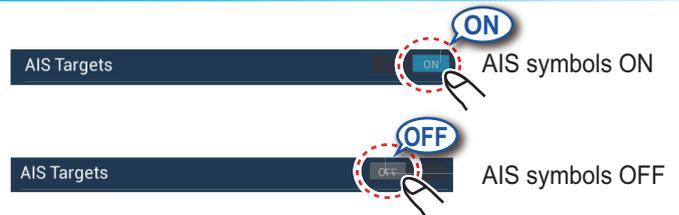
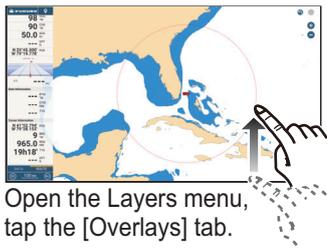
How to show the CPA Line

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



AIS (Automatic Identification System)

How to show or hide AIS target symbols



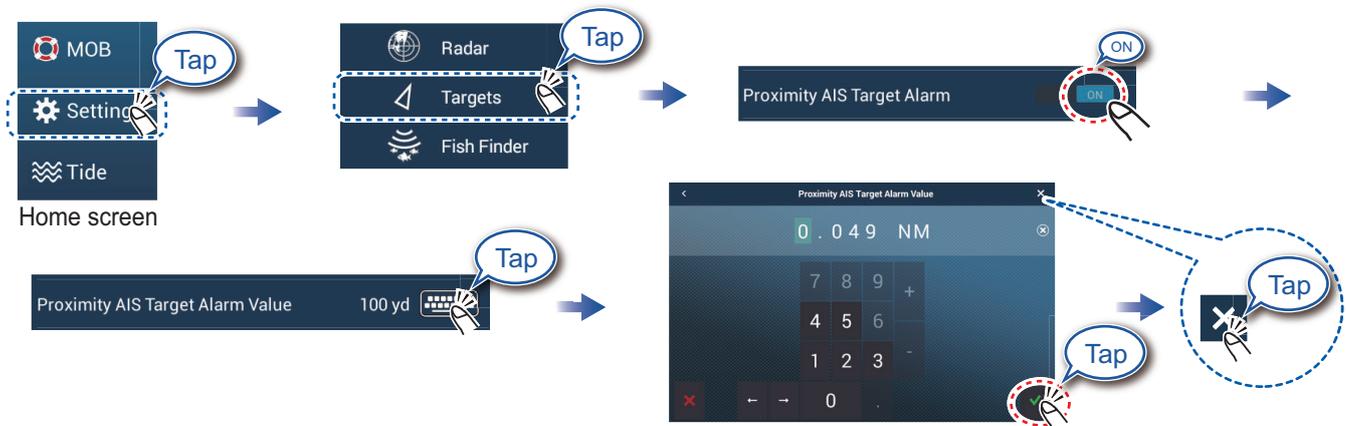
AIS target symbols

	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.

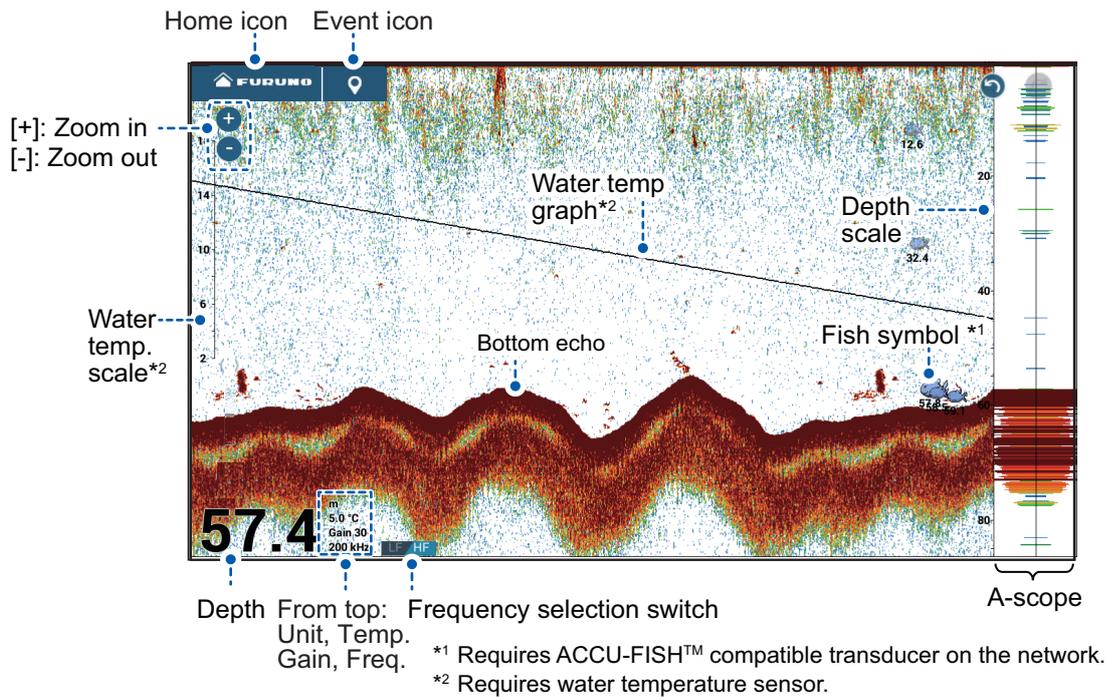


Set the alarm value, then tap [✓].

How to show AIS target data



Fish Finder



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

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.

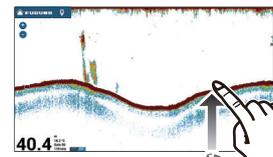
Dual Freq.



(LF: Low Freq.)



(HF: High Freq.)



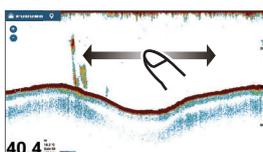
Open the Layers menu;
tap the [Fish Finder] tab.



Note

[TX/STBY] toggles between TX and standby.

How to show past echoes (echo history)



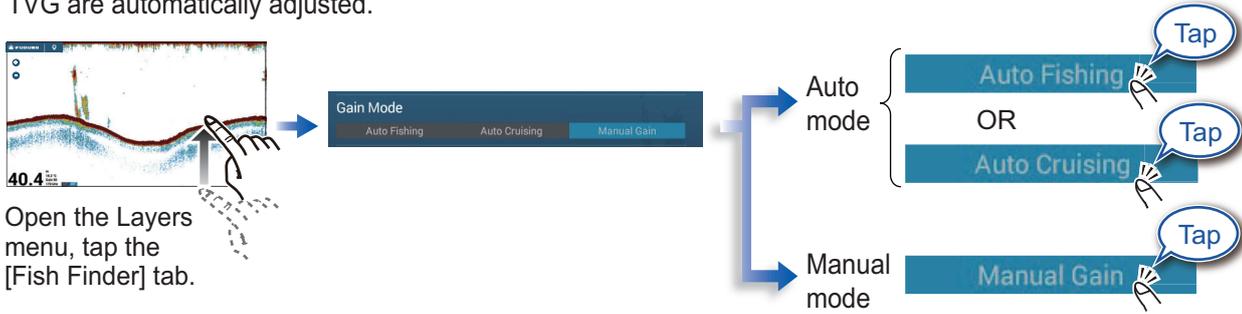
Swipe leftward or rightward
to show past echoes.



Return to normal display.

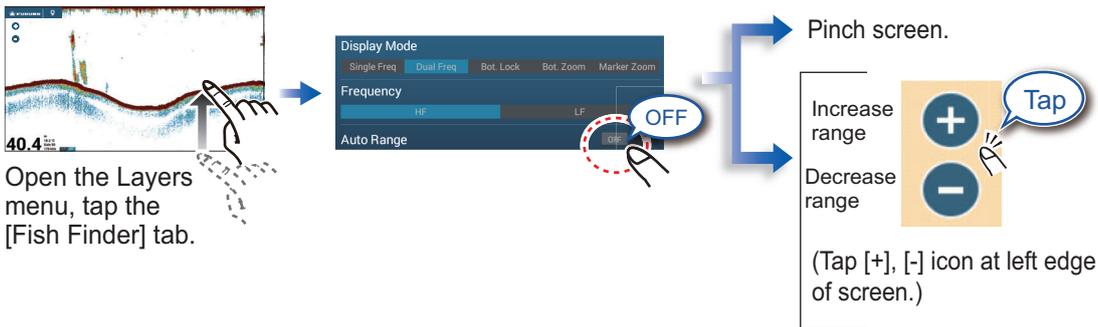
How to select the operating mode

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

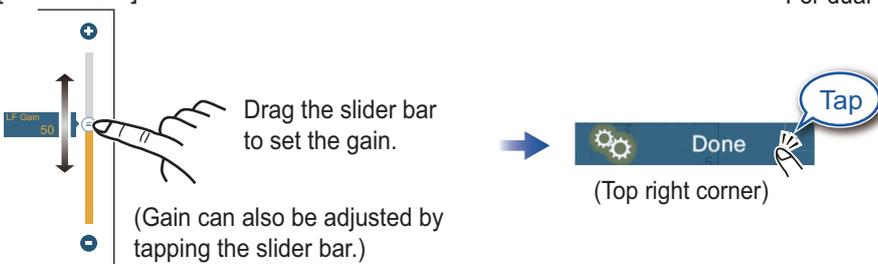
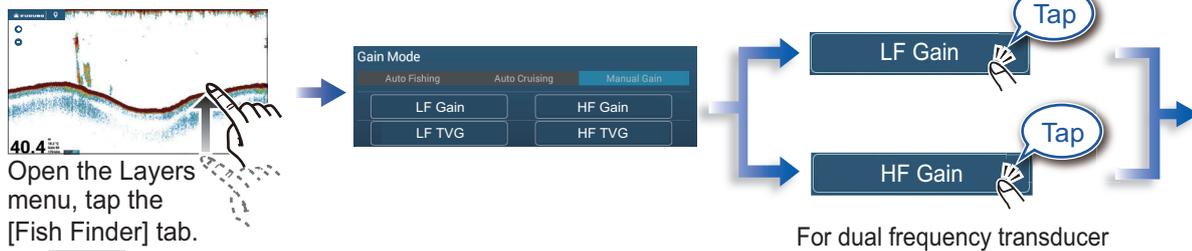


Manual mode

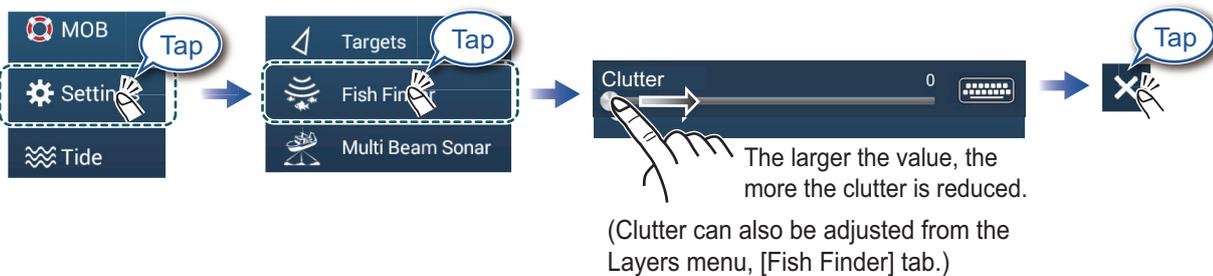
How to change the range



How to adjust the gain



How to reduce clutter



Zoom display

40.4
Show the Layers menu.

Fish Finder Source
TZT19F DEMO
Display Mode
Single Freq Dual Freq Bot Lock Bot Zoom Marker Zoom

Bot Lock Tap Bottom Lock
Search for bottom fish.

Bot Zoom Tap Bottom Zoom
Find bottom contour and hardness.

Marker Zoom Tap Marker Zoom
Help determine the size of a school of fish in the middle layer.

20.5
20.5
52.6

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

*: Zoom zone is shown with a yellow square.

ACCU-FISH™/Bottom Discrimination/RezBoost™

40.4
Show the Layers menu, tap the [Overlays] tab.

Fish Finder Overlays Settings

Interference Rejection: Off Low Medium High Auto

RezBoost: Standard Enhanced

Day Background Color

Bottom Search Mode: ON

Color Range Expansion: OFF

A-Scope: ON

Temperature Graph: OFF

Bottom Discrimination: OFF

ACCU-FISH: ON

Fish Alarm: OFF

RezBoost™
Raise the echo resolution. (Requires RezBoost™ capable transducer on the network.)

RezBoost: Standard Enhanced

Standard Enhanced

(Standard mode) (High resolution mode)

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

Bottom Discrimination: ON

Bottom discrimination display: 576

Rock Gravel Sand Mud

The most probable bottom material.

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

ACCU-FISH: ON

Fish symbol: 12

Fish size or depth

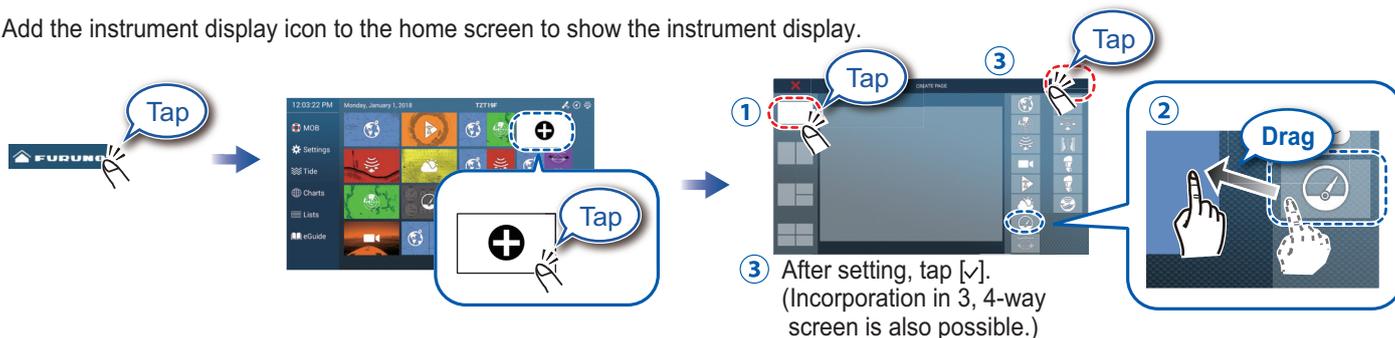
Notice
You can select fish symbol type, and fish size or depth indication from the menu - go to home screen, [Settings], [Fish Finder].

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 screen to show the instrument display.



How to switch instrument displays (ex. full display)



Swipe rightward or leftward to switch between displays.



How to edit the instrument display



Tap the instrument display, then tap [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.

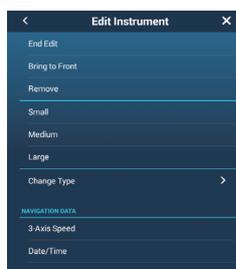
To end the edit mode

Tap the screen, then tap [End Edit] on the pop-up menu.

How to remove or change an indication



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

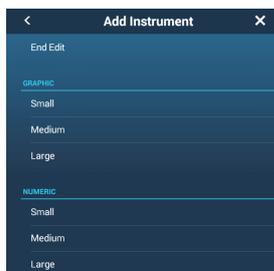


- Remove indication: Tap [Remove].
 - Change size: Tap [Small], [Medium], [Large], [Double Extra Large]*.
 - Change type: Tap [Change Type], then tap desired size.
 - Change indication: Tap indication in [NAVIGATION DATA], [ROUTE INFORMATION], [WIND AND WEATHER], and [ENGINE].
- * Numeric displays only

How to add an indication



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



Tap a size in desired category.



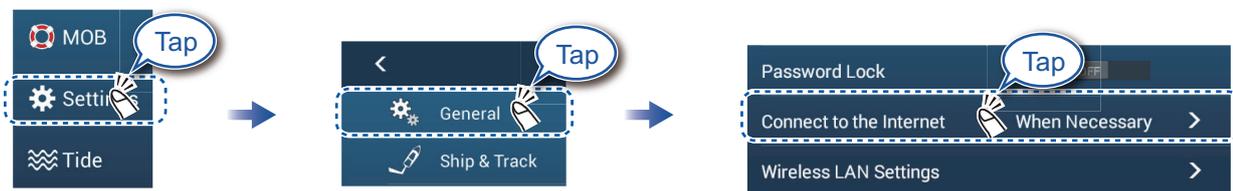
Tap added instrument display to change displayed data (see above).

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 TZtouch3 device.

How to connect to an existing LAN

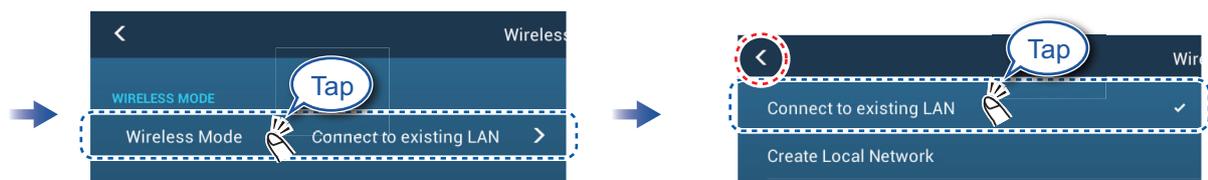
Connect to the existing LAN to download weather data or update the software. For smartphone and tablet settings, refer to appropriate manuals.



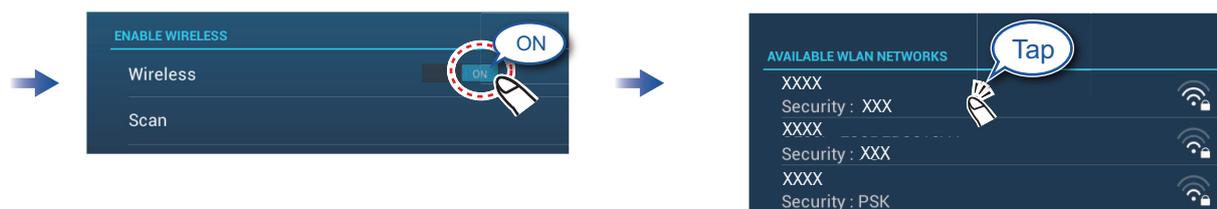
Home screen



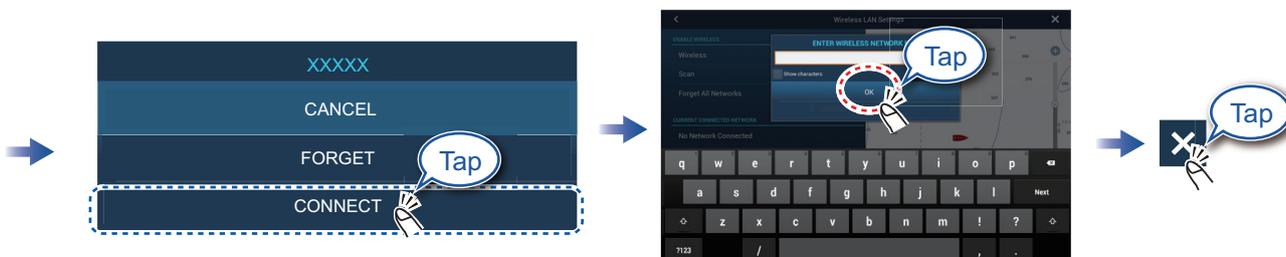
Select [When Necessary], then tap "<".



Select [Connect to existing LAN], then tap "<".



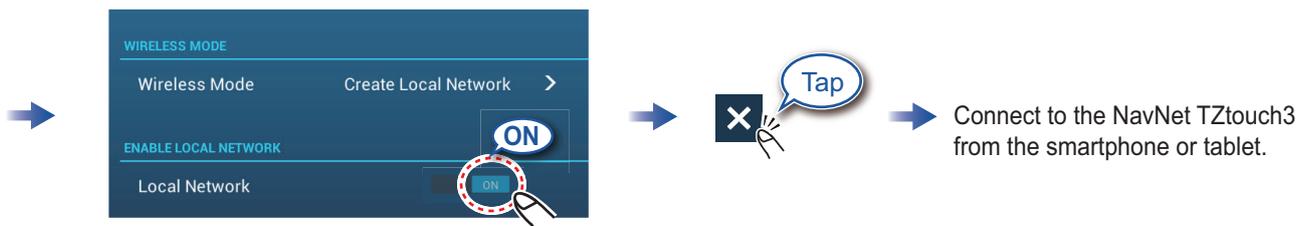
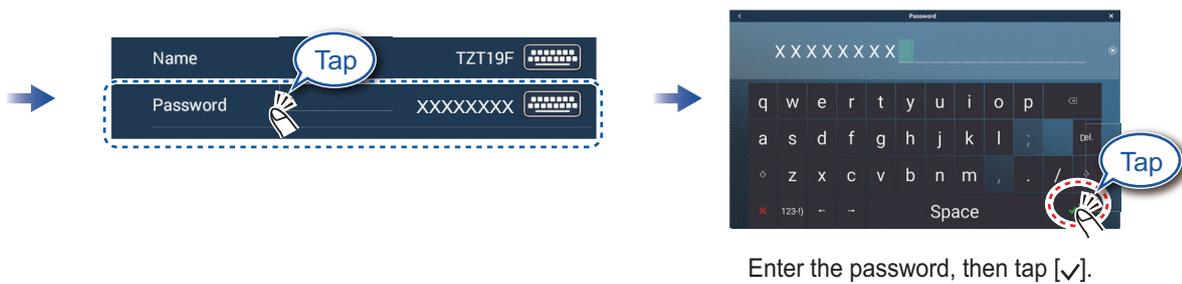
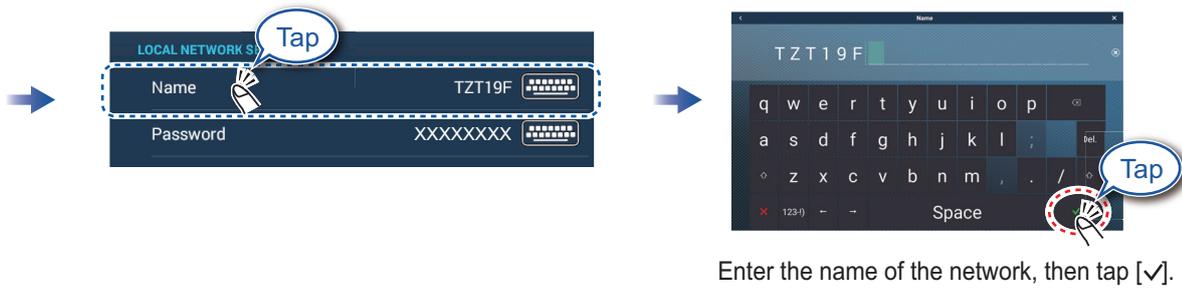
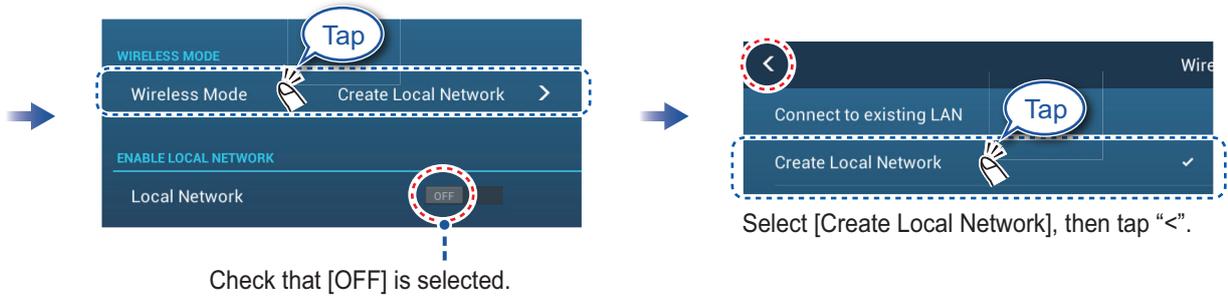
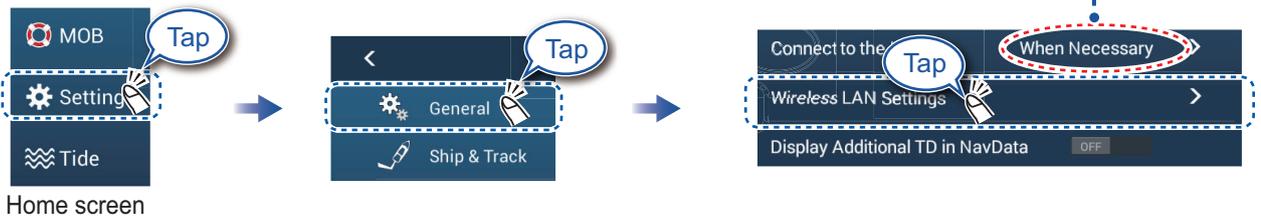
Tap network required.



Enter the password, then tap [OK].

How to create a local wireless network

Create a local wireless network to connect to an iPhone, iPod, iPad, or Android device.



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,
TZT9F/12F/16F/19F、TZT2BB**

(Product type, batch)

December / 31 / 2024

(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
23 May 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.**

