FURUNO

NAVnet TZ touch2

MULTI FUNCTION DISPLAY

Model TZTL12F/TZTL15F/TZT2BB

Operator's Guide

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 TZTL12F/TZTL15F. On-screen appearance for the TZT2BB may differ slightly, depending on the monitor used.

Operational Overview

Icon (home/displays), power switch operations

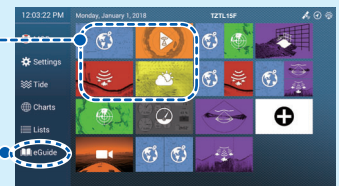### TZTL12F/TZTL15F

Tap

Home icon
"FURUNO" (TZT2BB only)
or "Home" indication

TZT2BB

Display icons
(max. 16 on home screen)

"eGuide" provides
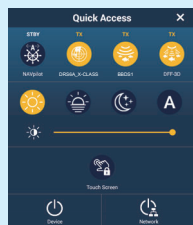an abbreviated
operator's guide.

Home screen

Power off

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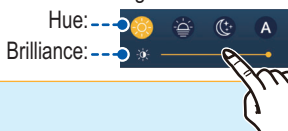**Network**: Powers off all NavNet TZtouch series units in network.

Brilliance, Hue

TZTL12F/15F: Adjust display brilliance.
TZT2BB: Adjust power lamp and key backlight brilliance.

Hue:
Brilliance:

Power switch

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

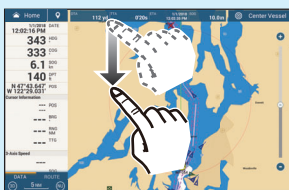#### How to edit a display icon

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

Tap

Edit — Delete

Display icon long tapped

Size
(large or small)
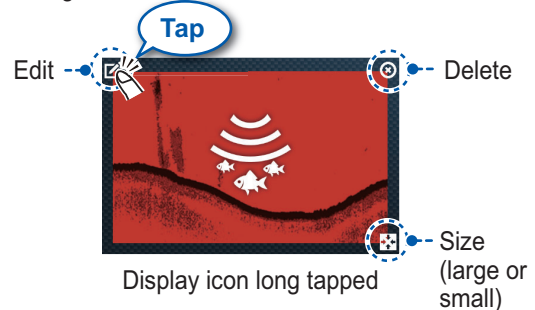
How to select a display

- 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.

Tap

Quick page

Operator's Manual
Download Link

FURUNO ELECTRIC CO., LTD.

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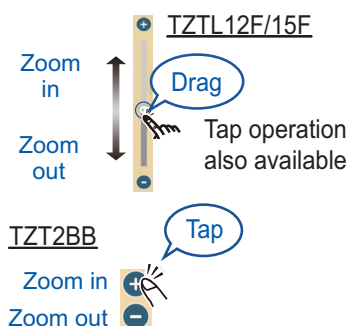- Scroll the menu.
- Show Slide-out menu, Layers menu.

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.

Slider bar

TZTL12F/15F

Zoom in
Zoom out

Drag

Tap operation also available

TZT2BB

Zoom in
Zoom out

Tap

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

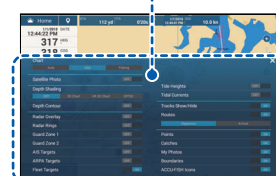Tap screen (applicable point, object, etc.)
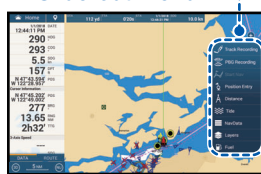
Pop-up menu

Tap the required function.

(">" indicates additional options.)

Slide-out menu

Swipe leftward from the right edge.

Slide-out menu

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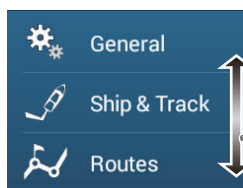Icon color and function state
Yellow: ON, White: OFF

Layers menu

Swipe upward from the bottom edge.

Layers menu

Tap the required function.

Settings menu

Tap

🏠 Home

Tap the [Home] icon.

🛟 MOB
⚙ Settings
〰 Tide

Tap

Tap [Settings].
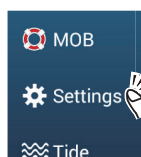
⚙ General
🖊 Ship & Track
🛤 Routes

Drag to find required menu, then tap item.

‹
Two Finger Tap Function
Two Finger Long Tap Function
Move Tool On Long Push
Password Lock
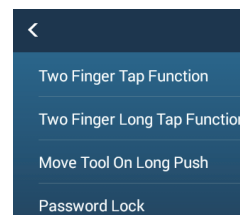
Tap the required menu item.

Chart Plotter

Event icon — Navigation bar

Center Vessel

Undo, Redo icons

Scale slider (TZT2BB displays +, - icons only.)

Data area

Status bar

Depth Alarm

COG vector (dashed line)

Heading line

Track

Own ship icon

Inactive route (sleeping)*

Point

Inactive route (expanded)

Switch between 2D and 3D. (Drag upward with two fingers also.)

Orientation Mode Switch between NU and HU.

3D: 2D:

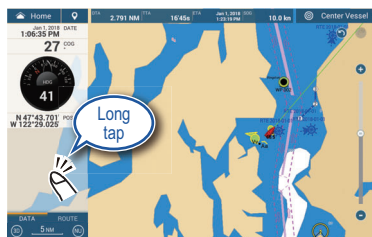*: Arrival or departure position, selectable on Layers menu.

Scale bar

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 add a data box;

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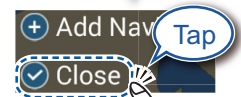
② Tap a data to add.

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

① Tap the data box to remove or change data.

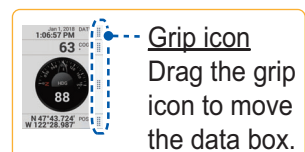② Remove a data box: Tap [Remove].
Change data: Tap the data to display.

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

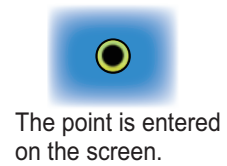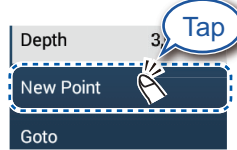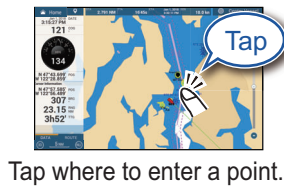Tap [Close] to finish.

Grip icon
Drag the grip icon to move the data box.
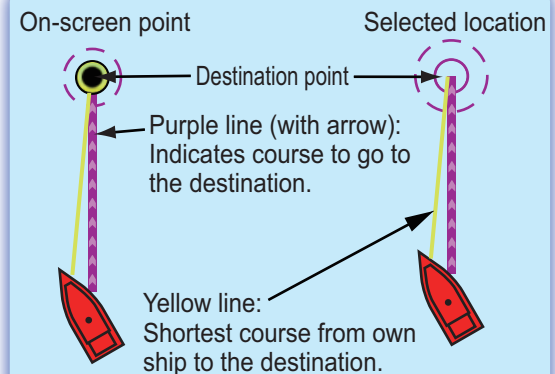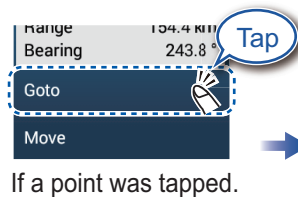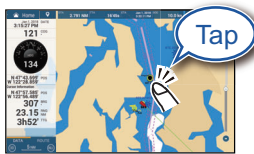
Points/boundaries

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.).
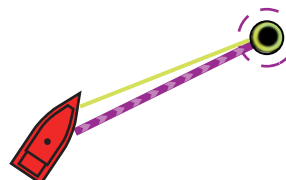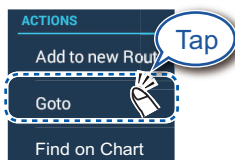
How to enter a point

Tap where to enter a point.

Depth | Tap
New Point
Goto

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.

Range | 154.4 km
Bearing | 243.8°
Goto | Tap
Move

If a point was tapped.

On-screen point — Destination point — Selected location

Purple line (with arrow): Indicates course to go to the destination.

Yellow line: Shortest course from own ship to the destination.

Points list

Tap [Lists] on the home screen.

Charts
Lists
eGuide

<
Points
Routes

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

| Date | Name | Icon | Color | Range | Add Point | X |

TODAY
	N 34°38.569'	1:05 PM	5.116 NM
	E 134°42.627'		
	N 34°28.033'	1/1/2018	
POINT5	N 34°37.467'	1/1/2018	16.49 NM
	E 134°21.908'	1:03 PM	
FISH4	N 34°08.247'	1/1/2018	21.64 NM
	E 135°06.157'	1:01 PM	
FISH3	N 34°33.548'	1/1/2018	28.67 NM
	E 135°16.073'	1:00 PM	
POINT3	N 34°17.781'	1/1/2018	18.35 NM
	E 134°29.900'	1:00 PM	
WP 004	N 33°59.907'	1/1/2018	33.94 NM
	E 134°47.384'	12:59 PM	
WP 003	N 33°25.268'	1/1/2018	69.14 NM
	E 134°55.595'	12:58 PM	
	N 33°13.872'	1/1/2018	

Tap the point to set as the destination.

ACTIONS
Add to new Route | Tap
Goto
Find on Chart

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.

New Route
New Boundary | Tap >
Tide

Area | Tap
Circle
Line

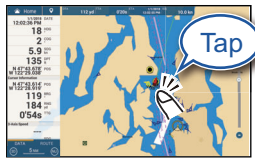Tap the shape to use for the boundary.

[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].
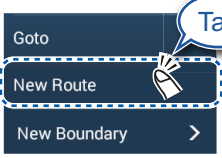
Routes

A route is comprised of a series of waypoints leading to a destination. Routes are saved to the routes list.
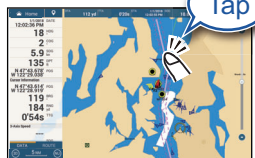
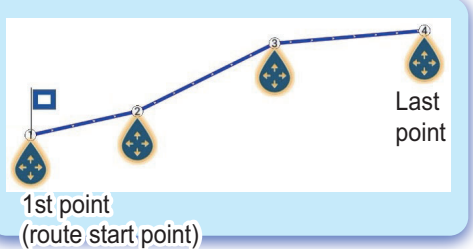## How to create a new route

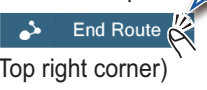Tap the first point for the route.

Goto
New Route
New Boundary

Tap

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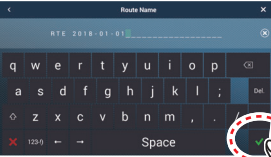Repeat to enter all points for the route.

1st point (route start point)

Last point

At the last point
End Route (Top right corner)
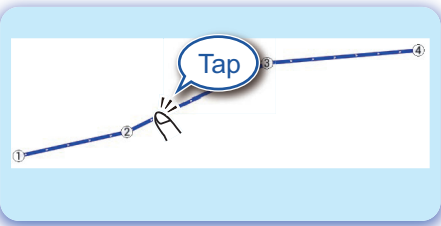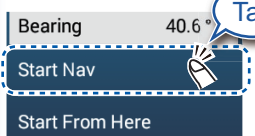
Route Name
RTE 2018-01-01

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

How to follow a route

On-screen route

Tap a leg of the route.

Bearing 40.6 °
Start Nav
Start From Here

Routes list

⊕ Charts
☰ Lists
📖 eGuide
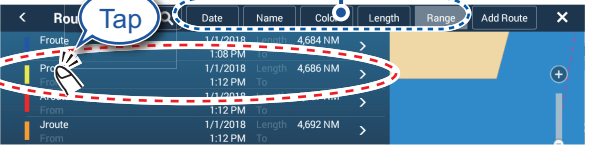
Home screen

< Points
Routes
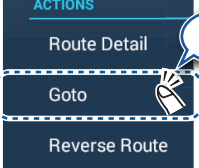
Sort list by date, name, color, length, or range.

	Date	Name	Color	Length	Range	Add Route	✕
Froute	1/1/2018 1:08 PM	To		4,684 NM			
Proute	1/1/2018 1:12 PM	To	Length	4,686 NM			
	1/1/2018 1:12 PM	From					
Jroute	1/1/2018 1:12 PM	From	Length	4,692 NM	To		

Tap the route to use.

ACTIONS
Route Detail
Goto
Reverse Route

Radar

Guard zone North mark Heading line Move own ship position to center

Data area

Slider bar (TZT2BB displays +, - icons only.)

Range

Own ship position Fixed range rings
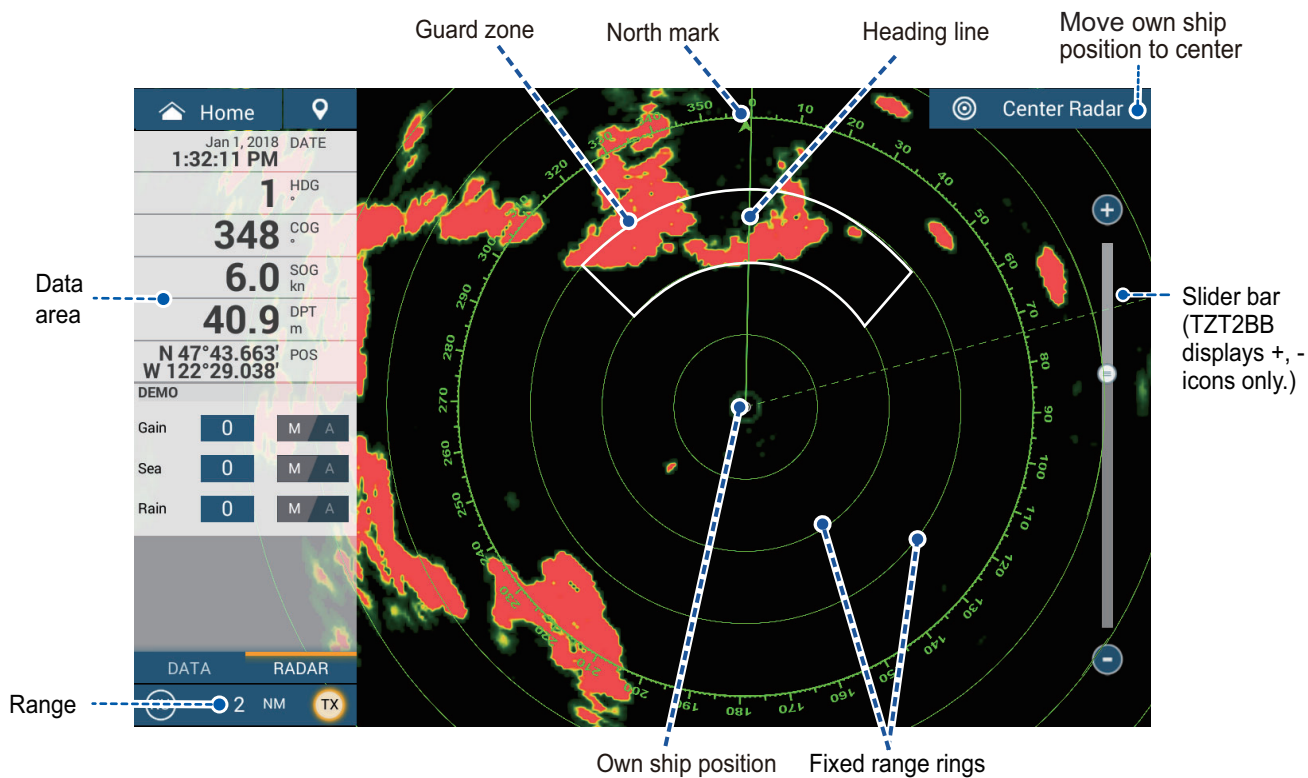
How to switch between standby and TX

Tap

1.5 NM TX

(lower left side of the screen)

TX : TX

TX : Standby
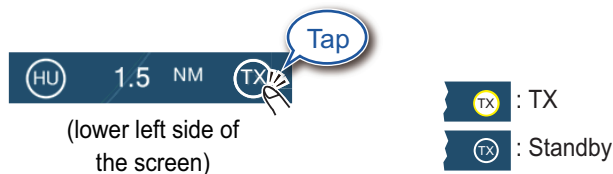
How to adjust the gain / sea clutter / rain clutter

DATA RADAR

Tap

(At bottom of data area)

Switch

"A" means automatic adjustment
"M" means manual adjustment

Radar Control
Gain M A
Sea M A
Rain M A

Tap

Tap to switch between automatic and manual.

Auto adjustment mode

Switch

Radar Control
Gain 74 M A
Sea 60 M A
Rain 54 M A

Tap

Manual adjustment mode

Drag or tap the slider bar to adjust.

Gain 74

Done

Tap

(Top right corner)
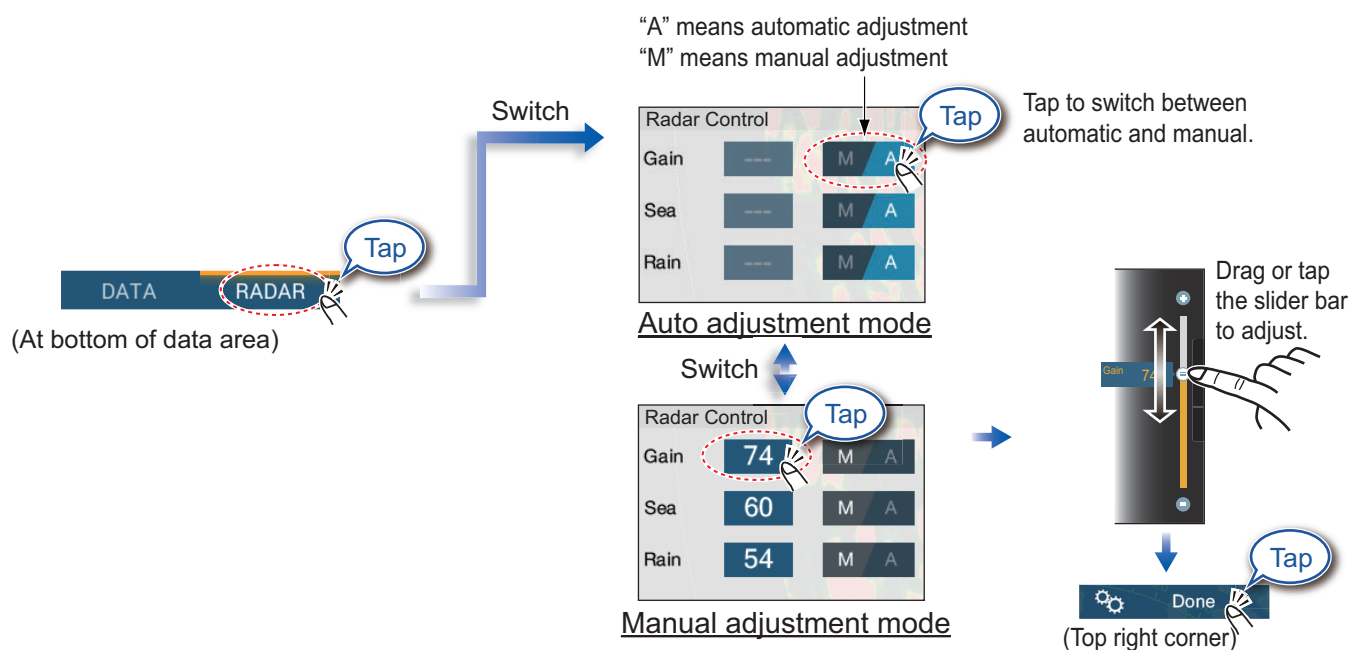
How to measure the range, bearing from own ship to a target
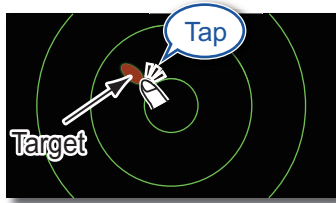
Tap a target to show its range and bearing from own ship.

Range	0.636 NM
Bearing	237.5 ° R

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.

Guard Zone 1 — ON
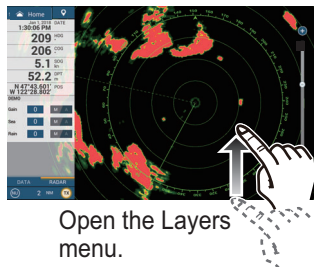
Guard Zone 2 — ON

The guard zone appears in dashed lines.
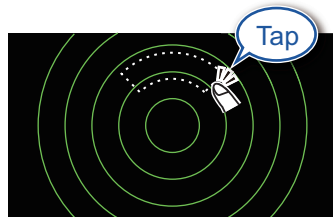
Tap dashed line on guard zone.

Alarm — OFF
Auto Acquire — OFF
Resize — Tap
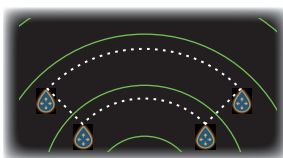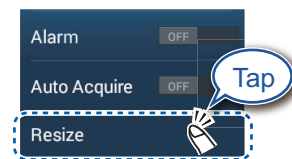
An icon appears at each corner of the guard zone.

Drag the icons to set guard zone.
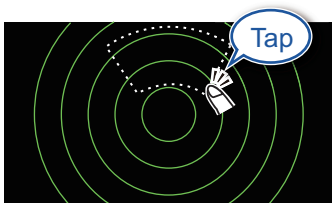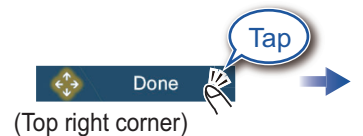
Done
(Top right corner)

Tap the guard zone again.

Alarm — ON
Auto Acquire — OFF
Resize
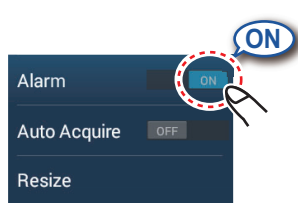
The dashed lines change to solid lines, indicating the guard zone is active.

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
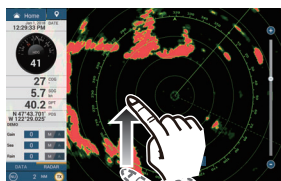
Open the Layers menu.

ARPA Targets — **ON** — ARPA symbols ON

ARPA Targets — **OFF** — ARPA symbols OFF

How to manually acquire a target

Target — Tap → Acquire — Tap → 1

Tap the target to acquire.
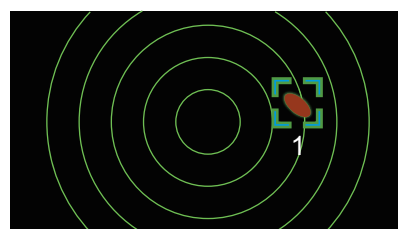
How to automatically acquire a target

Tap → Auto Acquire — **ON** → 1
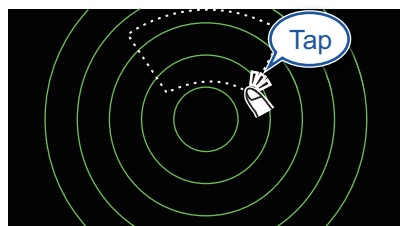
Set a guard zone, then tap the guard zone.

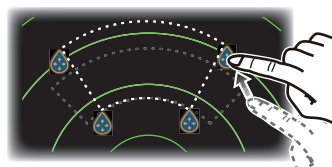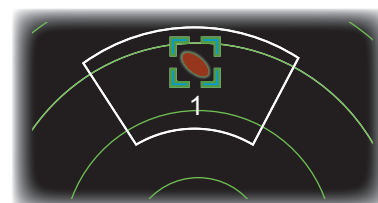The dashed lines change to solid lines, indicating the guard zone is active.

ARPA symbols

At acquisition

30 seconds after acquisition

Lost target

How to display target data

ARPA symbol — Tap
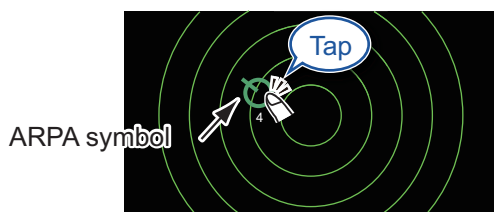
Tap an ARPA target to show its data.
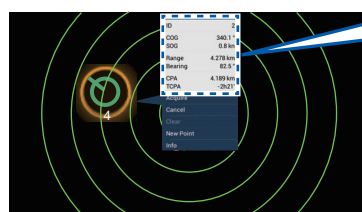
ID	2
COG	340.1 °
SOG	0.8 kn
Range	4.278 km
Bearing	82.5 °
CPA	4.189 km
TCPA	-2h21'

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

MOB	Tap		Radar	Tap			ON
⚙ Setting		→	◁ Targets		→	CPA/TCPA Alarm ON	→
〰 Tide			〰 Fish Finder				

Home screen

CPA Alarm Value	0.500 NM	Tap

OR

TCPA Alarm Value	10'	Tap

CPA Alarm Value

0 0 . 5 0   NM ⊗

```
7  8  9  +
4  5  6
1  2  3  -
×  ←  →  0  .  ✓
```

Set the alarm value, then tap [✓].
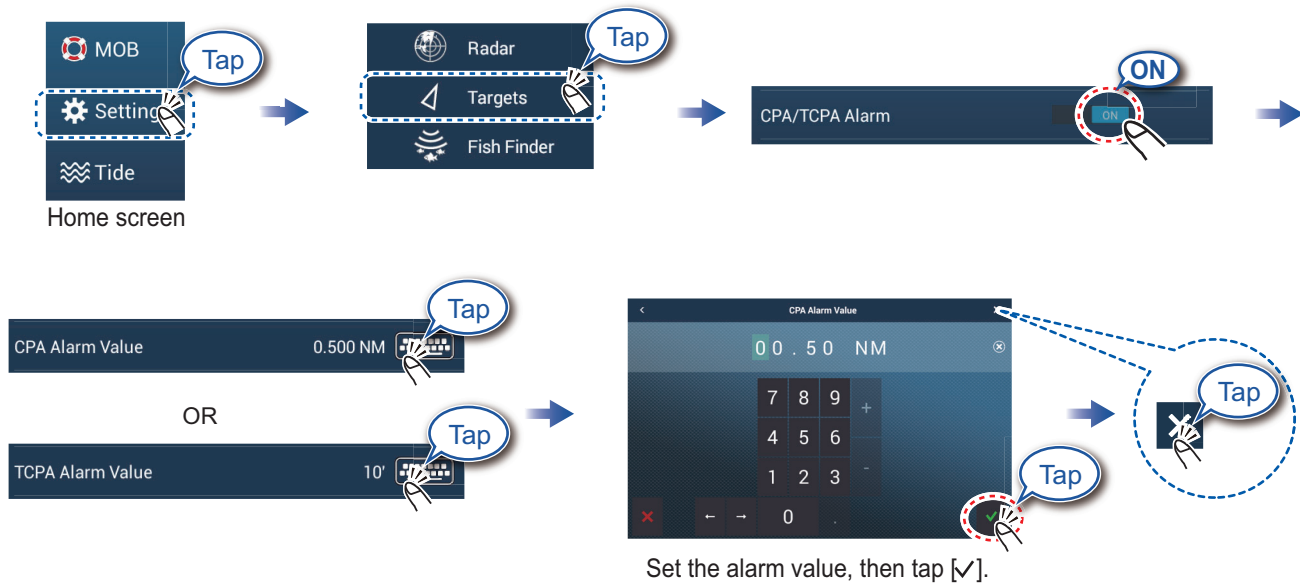
How to acknowledge the CPA/TCPA alarm

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

Tap

CPA/TCPA 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

MOB	Tap		Radar	Tap			ON
⚙ Setting		→	◁ Targets		→	CPA Graphic Display ON	
〰 Tide			〰 Fish Finder				

Home screen
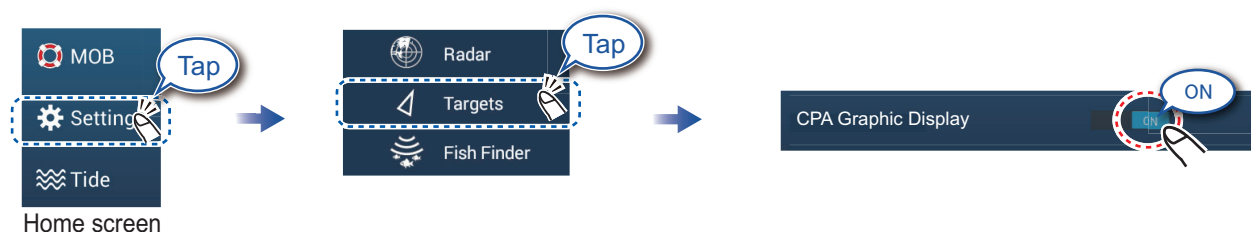
How to show the CPA Line

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

CPA Line →

ARPA target 5   Tap

Own ship ○
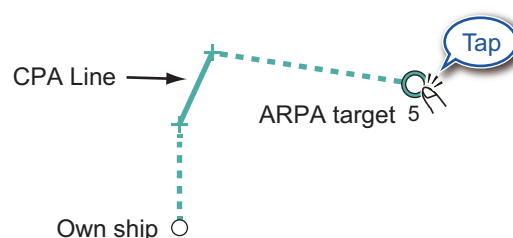
AIS (Automatic Identification System)

How to show or hide AIS target symbols
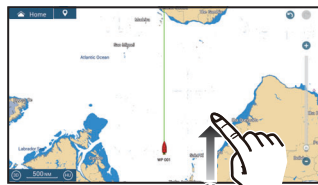
Open the Layers menu.

AIS Targets — ON — AIS symbols ON

AIS Targets — OFF — AIS symbols OFF

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.

MOB
Settings — Tap
Tide

Home screen

Radar
Targets — Tap
Fish Finder

Proximity AIS Target Alarm — ON

Proximity AIS Target Alarm Value — 100 yd — Tap

0 . 0 4 9 NM

Proximity AIS Target Alarm Value
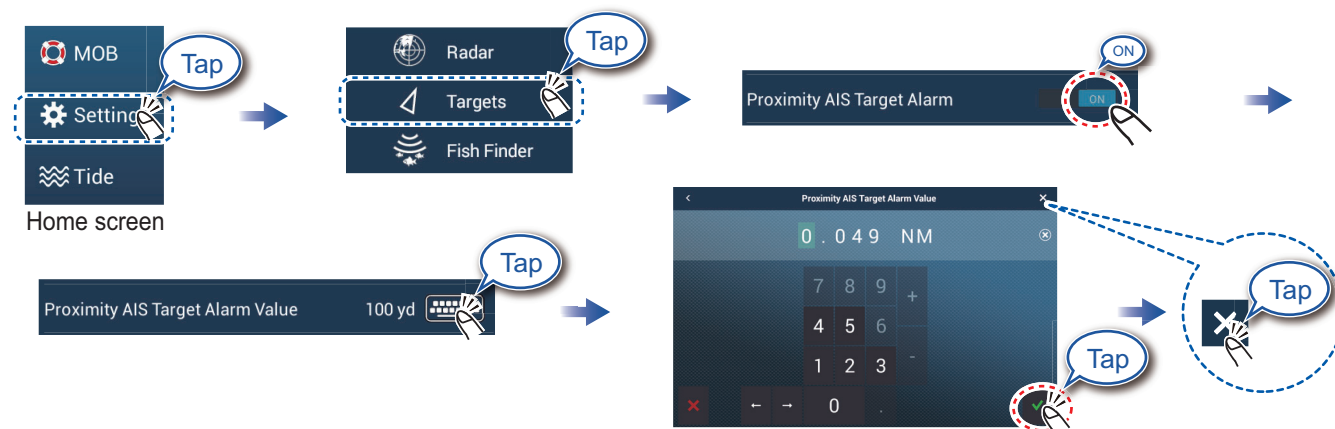
Set the alarm value, then tap [✓].

How to show AIS target data
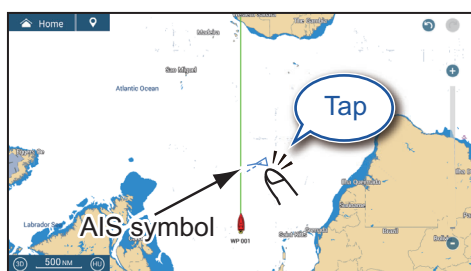
Tap AIS symbol.

AIS symbol — Tap

Name	WALLA WALLA...
MMSI	366710810
COG	263.4 °
SOG	0.1 kn
Range	650 NM
Bearing	118.0 °
CPA	648 NM
TCPA	-1d10h
Last Update	0'07s

Fish Finder

Home icon   Event icon

Slider bar (TZT2BB displays +, - icons only.)

Water temp. scale*2

Water temp graph*2

Depth scale

Fish symbol *1

Bottom echo

57.4

A-scope

Depth   From top: Unit, Temp. Gain, Freq.   Frequency selection switch

*1 Requires ACCU-FISH™ compatible transducer on the network.
*2 Requires water temperature sensor.
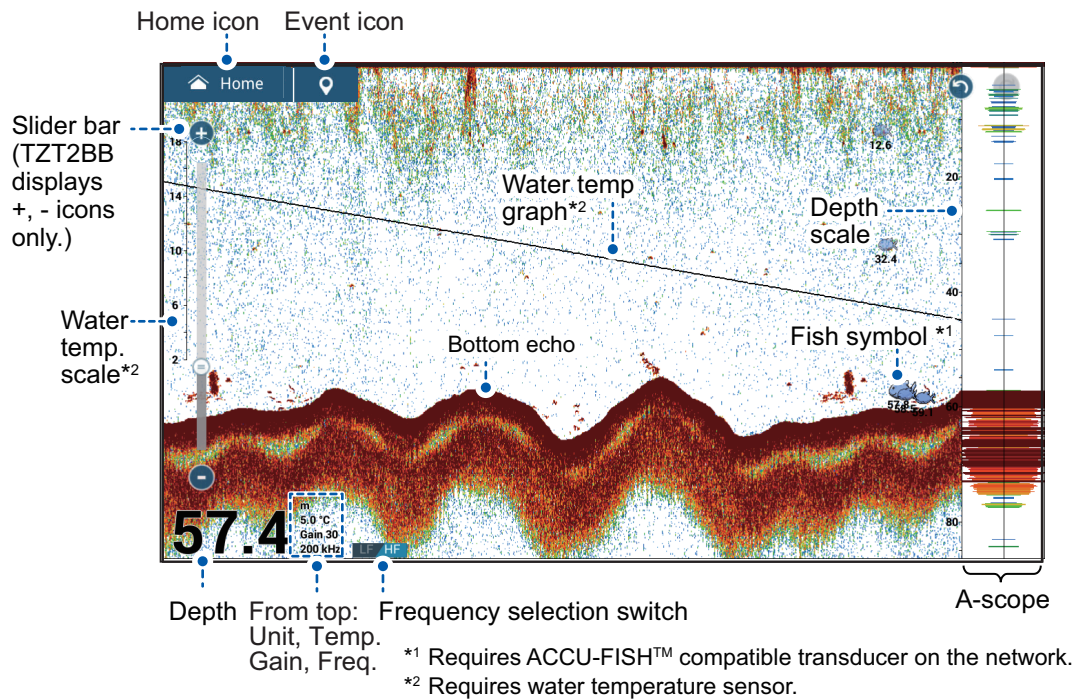
Note: Names of menu items may be different depending on the transducer connected on the network.

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.

Open the Layers menu.

Single Freq.   Dual Freq.

Tap   Tap

Display Mode   Display Mode
Single Freq Dual Freq   Single Freq Dual Freq

Tap

Frequency
HF   LF

(LF: Low Freq.)

Frequency
HF   LF

Tap

(HF: High Freq.)
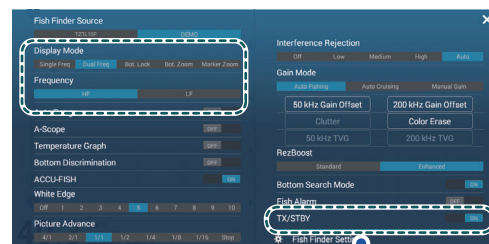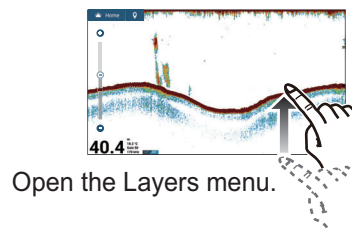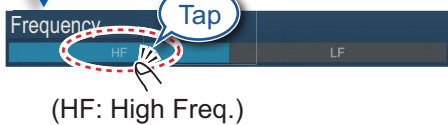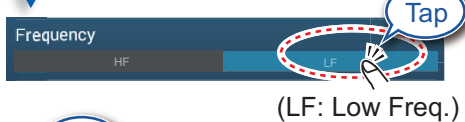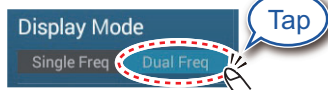
Note
[TX/STBY] toggles between TX and standby.

How to show past echoes (echo history)

Swipe leftward or rightward to show past echoes.

Tap

Cancel Hist.

(Top right corner)
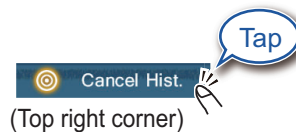
Return to normal display.

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.

Show the Layers menu.

Gain Mode — Auto Fishing | Auto Cruising | Manual Gain
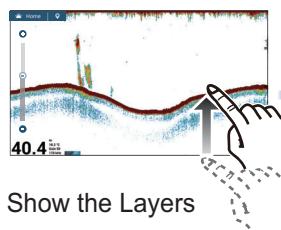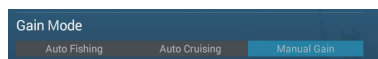
Auto mode
Auto Fishing — **Tap**
OR
Auto Cruising — **Tap**

Manual mode
Manual Gain — **Tap**

Manual mode

How to change the range

Show the Layers menu.

Display Mode — Single Freq | Dual Freq | Bot. Lock | Bot. Zoom | Marker Zoom
Frequency — HF | LF
Auto Range — **OFF**
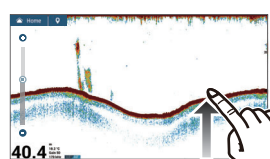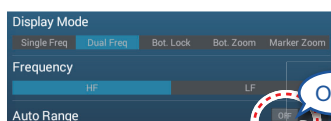
Pinch screen.

TZTL12F/15F
Drag the slider bar to set the range.

(The slider bar can also be tapped to set the range.)

TZT2BB: Tap +, - icon.

How to adjust the gain

Show the Layers menu.

Gain Mode — Auto Fishing | Auto Cruising | Manual Gain
50 kHz Gain | 200 kHz Gain
Clutter | Color Erase
50 kHz TVG | 200 kHz TVG

53 kHz Gain — **Tap**
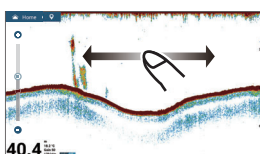200 kHz Gain — **Tap**
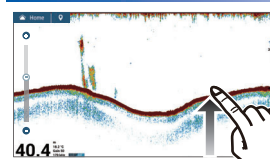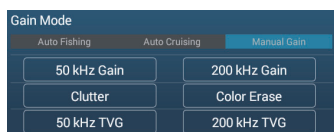
For dual frequency transducer
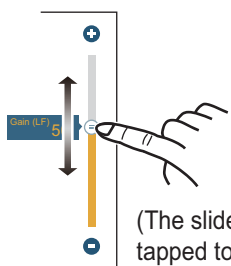
Gain (LF) 5
Drag the slider bar to set the gain.

(The slider bar can also be tapped to set the gain.)
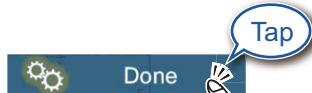
Done — **Tap**
(Top right corner)

How to reduce clutter

MOB
Settings — **Tap**
Tide

Targets
Fish Finder — **Tap**
Multi Beam Sonar

Clutter   0

Tap

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

(Clutter can also be adjusted from the Layers menu.)

Zoom display

Show the Layers menu.

40.4

Tap — Bot. Lock

Bottom Lock
Search for bottom fish.

Tap — Bot. Zoom

Bottom Zoom
Find bottom contour and hardness.

Tap — Marker Zoom

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

Fish Finder Source — TZTL15F — DEMO

Display Mode — Single Freq | Dual Freq | Bot. Lock | Bot. Zoom | Marker Zoom

20.5

20.5
- Short tail indicates soft bottom.
- Long tail indicates hard bottom.

52.6
*: Zoom zone is shown with an yellow square.

ACCU-FISH™/Bottom Discrimination/RezBoost™

Show the Layers menu.

40.4

Fish Finder Source — TZTL15F — DEMO
Display Mode — Single Freq | Dual Freq | Bot. Lock | Bot. Zoom | Marker Zoom
Auto Range — ON
A-Scope — ON
Temperature Graph — ON
Bottom Discrimination — OFF
ACCU-FISH — ON
White Edge — Off 1 2 3 4 **5** 6 7 8 9 10
Picture Advance — 4/1 2/1 1/1 1/2 1/4 1/8 1/16 Stop
Interference Rejection — Off Low Medium High Auto

Gain Mode — Auto Fishing | Auto Cruising | Manual Gain
50 kHz Gain | 200 kHz Gain
Clutter | Color Erase
50 kHz TVG | 200 kHz TVG
RezBoost — Standard | Enhanced
Preset Frequencies — Preset0 | Preset1 | Preset2
Bottom Search Mode — ON
Fish Alarm — OFF
TX/STBY — ON
⚙ Fish Finder Settings

Bottom Discrimination

Show probable bottom hardness.
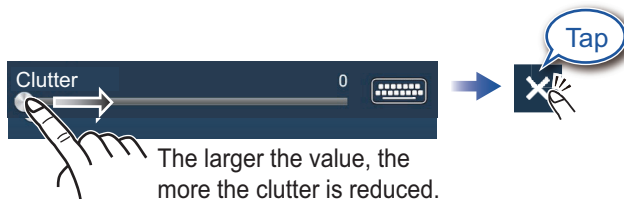(Requires bottom discrimination capable transducer.)

Bottom Discrimination — ON

Bottom discrimination display **576**
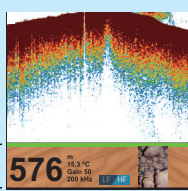
The most probable bottom material.

- Rock
- Gravel
- Sand
- Mud

RezBoost™

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

RezBoost — Standard | Enhanced

Standard | Enhanced
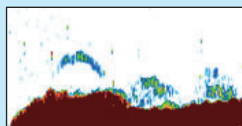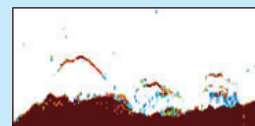
(Standard mode)   (High resolution mode)

ACCU-FISH™

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

ACCU-FISH — ON

Fish symbol
Fish size or depth — **12**

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.

Tap → Home

Tap ⊕

Tap ⊕

① Tap

③ Tap

② Drag

③ After setting, tap [✓].
(Incorporation in 3, 4*-way screen is also possible.)
*4-way screen is available only with TZT2BB.

How to switch instrument displays (ex. full display)

Sailing display

Swipe rightward or leftward to switch between displays.

Cruising display

How to edit the instrument display

Edit mode

Tap

Tap the instrument display, then tap [Edit Page] on the pop-up menu.

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

Tap

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

Edit Instrument ×
End Edit
Bring to Front
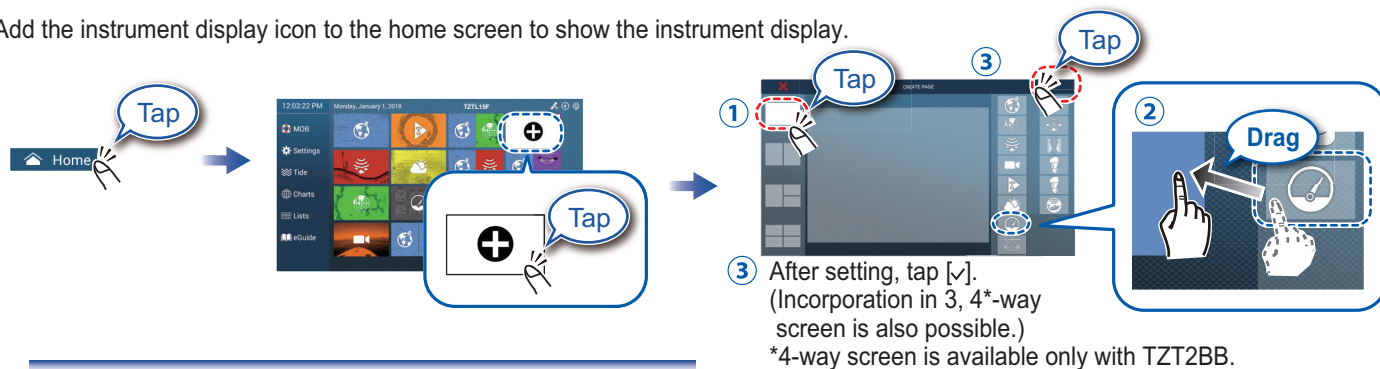Remove
Small
Medium
Large
Change Type   >
NAVIGATION DATA
3-Axis Speed
Date/Time
COG - Course Over Ground
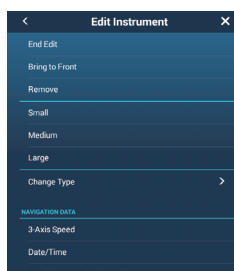
- Remove indication: Tap [Remove].
- Change size: Tap [Small], [Medium], [Large], [Double Extra Large]*.
- Change type: Tap [Change Type], then tap desired size.
- Change indication: Tap indication in [NAVIGATION DATA], [ROUTE INFORMATION], [WIND AND WEATHER], and [ENGINE].
* TZT2BB, numeric displays only

How to add an indication

Tap

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

Add Instrument ×
End Edit
GRAPHIC
Small
Medium
Large
NUMERIC
Small
Medium
Large
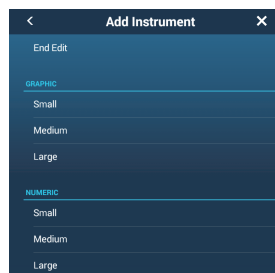
Tap a size in desired category.

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 (TZT2BB only) and connect to an iPhone, iPod, iPad, or Android™ device, to operate and monitor a NavNet TZtouch2 device.

Note: This procedure is not available from a monitor connected to the HDMI OUT2 port (TZT2BB only).

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.

	MOB	Tap
⚙	Settings	
🌊	Tide	

Home screen

<
⚙ General   Tap
🖊 Ship & Track

Password Lock   Tap
Connect to the Internet   When Necessary   >
Wireless LAN Settings   >

Connec
Never
At Startup   Tap
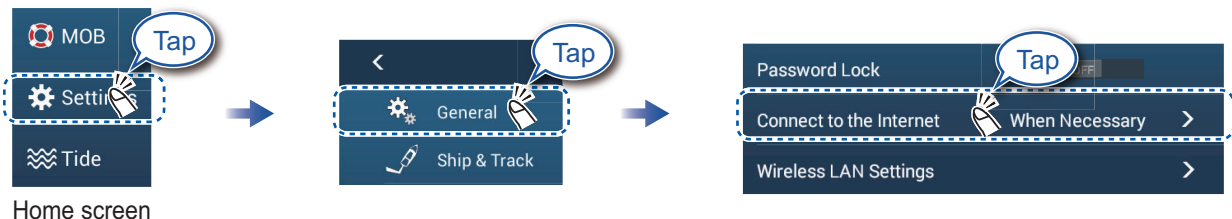When Necessary   ✓
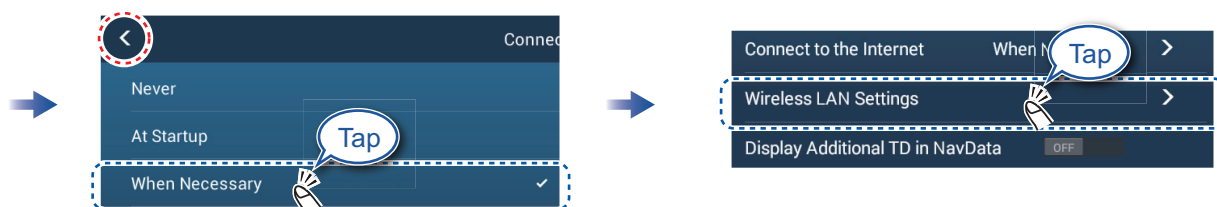
Select [When Necessary], then tap "<".

Connect to the Internet   When N   Tap
Wireless LAN Settings   >
Display Additional TD in NavData   OFF

<   Wireles
WIRELESS MODE   Tap
Wireless Mode   Connect to existing LAN   >

<   Wir   Tap
Connect to existing LAN   ✓
Create Local Network
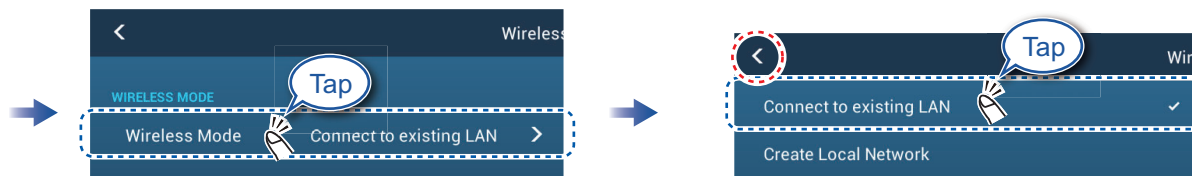
Select [Connect to existing LAN], then tap "<".

ENABLE WIRELESS   ON
Wireless   ON
Scan

AVAILABLE WLAN NETWORKS   Tap
XXXX
Security : XXX
XXXX
Security : XXX
XXXX
Security : PSK

Tap network required.

XXXXX
CANCEL
FORGET   Tap
CONNECT
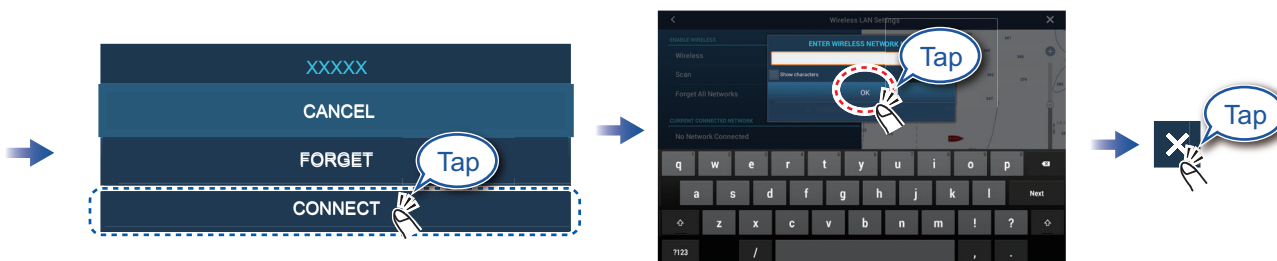
Enter the password, then tap [OK].

Tap

How to create a local wireless network

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

Check that [When Necessary] is selected.

MOB — Tap

Setting

Tide

Home screen

Tap — General

Ship & Track

Connect to the — When Necessary — Tap

Wireless LAN Settings

Display Additional TD in NavData — OFF

WIRELESS MODE — Tap

Wireless Mode — Create Local Network

ENABLE LOCAL NETWORK

Local Network — OFF

Check that [OFF] is selected.

Wire

Connect to existing LAN — Tap

Create Local Network ✓

Select [Create Local Network], then tap "<".

LOCAL NETWORK S — Tap

Name — TZTL15F

Password — XXXXXXXX

Name — TZTL15F

q w e r t y u i o p

a s d f g h j k l ;

z x c v b n m , . /

123-!) ← → Space — Tap ✓

Enter the name of the network, then tap [✓].

Name — TZTL15F — Tap

Password — XXXXXXXX

Password — XXXXXXXX

Q W E R T Y U I O P

A S D F G H J K L :

Z X C V B N M < > ?

123-!) ← → Space — Tap ✓

Enter the password, then tap [✓].

WIRELESS MODE

Wireless Mode — Create Local Network

ENABLE LOCAL NETWORK — ON

Local Network — ON

× — Tap

Connect to the NavNet TZtouch2 from the smartphone or tablet.