FURUNO

NAVnet TZ touch 3

Model:

TZT12F/16F/19F

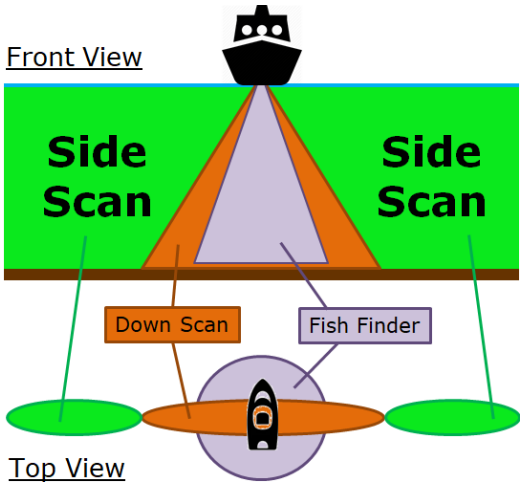
CHIRP Side-Scan

INDEX

1. What is Side-Scan?

1.1. Sounding Options – Different Views

The following diagram shows sounding options available on the market.



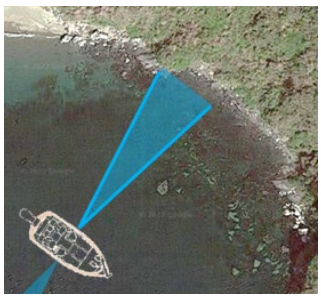
Fish Finder detects right below bottom of the boat in a circle zone.

Down Scan scans below the bottom of the boat. The detection zone is wider in port-starboard and very narrow in fore-aft.

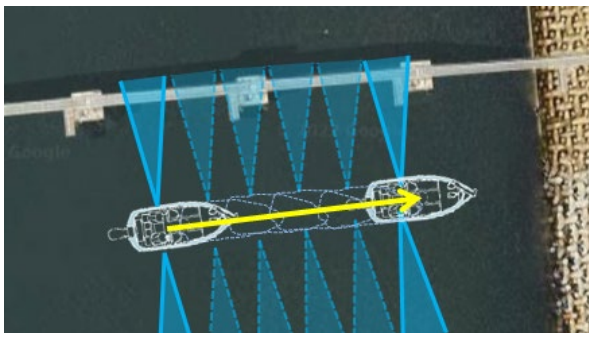
Side-Scan focuses on both port and starboard sides of the boat, not scanning right below the boat.

1.2. Why Side-Scan?

Side-Scan helps your boating and fishing operation in the following ways.



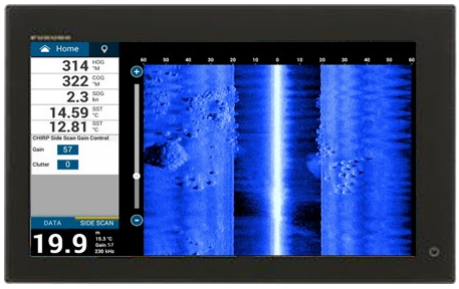
- See the shape of structures for fishing inshore or along the coast
- Find your own bottom structures, which are not shown on charts
- Avoid risk of collision by unintentionally drifting into shallow areas
- See fish off to the sides
- See the presence of fish targets around structures before casting a lure or jig



E.g., run along piers to search for fish locations, instead of stopping between each pier.

1.3. Solution by FURUNO

Update the software of a TZT12F/16F/19F to version 3.01 and connect one of three available transducers to configure it as CHIRP Side-Scan!



See the next sections for details of specifications, interconnection, settings, and operation.

2. Compatible MFDs and Transducers

2.1. Compatible MFDs

The following table summarizes compatible MFDs for CHIRP Side-Scan. While the transducer can be directly connected to a TZT12F/16F/19F v3.01 for display and setup, a TZT9F v3.01 and TZT2BB v9.01 can be networked to a TZT12F/16F or 19F, to control, view, and set up the CHIRP Side-Scan.

Model	Software	Descriptions
TZT12F	V3.01	The CHIRP Side-Scan transducers models 225T-SS904 (Thru-hull), 225T-TM904 (Transom Mount), and 225T-PR904 (Paired) can be connected to the 12-pin transducer port.
TZT16F	V3.01	
TZT19F	V3.01	
TZT9F	V3.01	The transducer port of TZT9F and TZT2BB built-in Fish Finder cannot be used for CHIRP Side-Scan. However, the TZT9F v3.01 and TZT2BB v9.01 can display, control, and adjust settings from a networked TZT12F/16F/19F that has a CHIRP Side-Scan Transducer connected.
TZT2BB	V9.01	

2.2. CHIRP Side-Scan Transducers

Three models are available, Thru-Hull, Transom, and paired set.

Thru-Hull (Model # 225T-SS904)

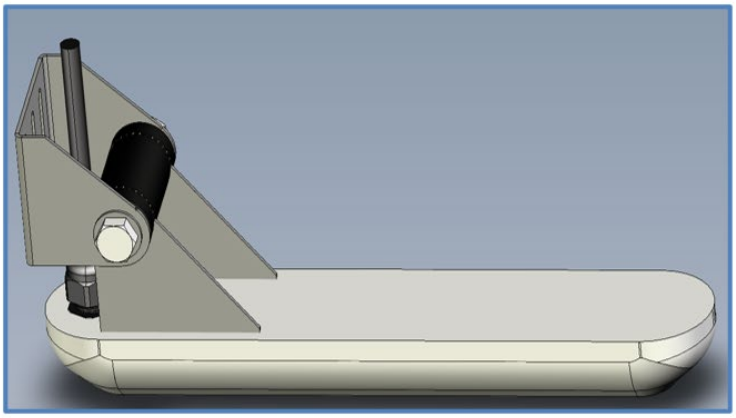
Center Frequency : 230 kHz (CHIRP)

Power Rating : 150W each side

12 m cable with 12-pin connector for TZT12F/16F/19F

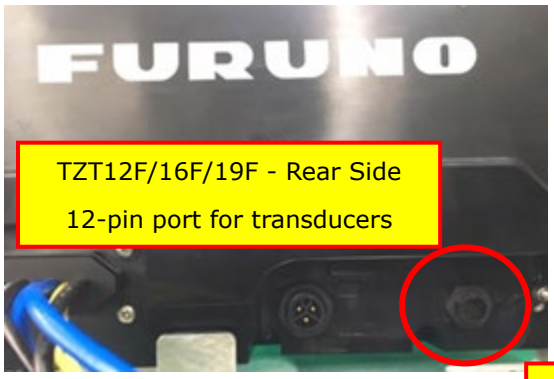
Temperature sensor included

Transom Mount (225T-TM904)



Paired Set (225T-PR904

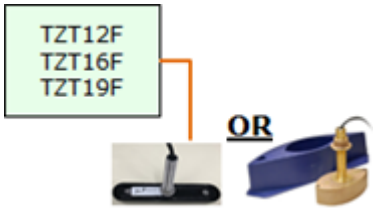
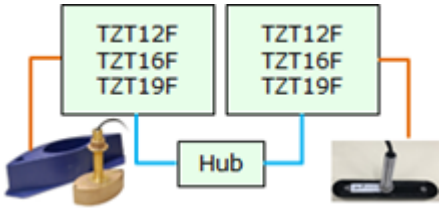
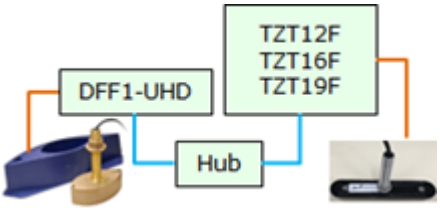
3. Interconnection



The TZT12F/16F/19F v3.01 – built-in Fish Finder is updated to enable it to process CHIRP Side-Scan signals. The Dual Band internal CHIRP Fish Finder in the TZT12F/16F/19F is utilized to process CHIRP Side-Scan images from port and starboard.

In order to use the CHIRP Side-Scan function on the TZT12F/16F/19F, just connect the CHIRP Side-Scan transducer to the 12-pin transducer port. The transducer TID information will set the internal Fish Finder to Side-Scan mode.

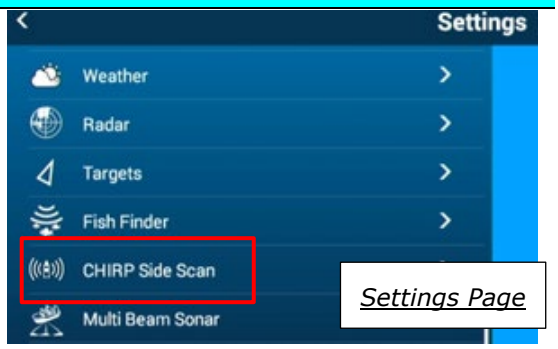
The following table shows how the CHIRP Side-Scan transducer can be connected when a 1 kW Dual Band CHIRP is also required.

Single MFD	Multi MFDs	Single MFD with DFF1-UHD
		
In a single configuration without an external Fish Finder sensor, either Side-Scan or built-in Fish Finder can be used, not both. There is only one transducer port on the MFD. Connect either the CHIRP Side-Scan or Dual Band CHIRP transducer to the 12-pin port.	In multi station networks, connect the CHIRP Side-Scan transducer to one of the MFDs and a Dual Band CHIRP transducer to the other.	When the DFF1-UHD is installed for a 1 kW 50/200 kHz Dual Band CHIRP (B265LH, etc.), in addition to a single TZT12F/16F/19F, connect the CHIRP Side-Scan transducer to the MFD and the Dual Band CHIRP transducer to the DFF1-UHD.

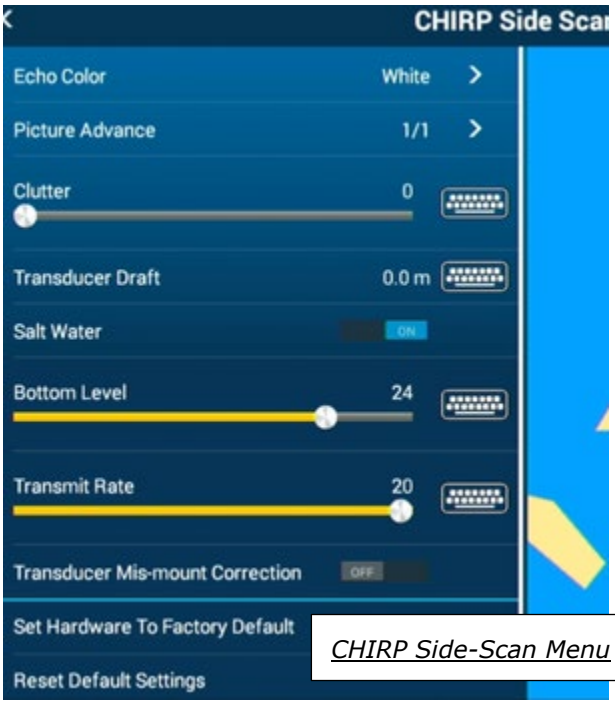
4. Menu Settings and Operation

4.1. CHIRP Side-Scan Settings

Once the TDID of the CHIRP Side-Scan transducer is detected by the connected TZT12F/16F/19F, the full content of the CHIRP Side-Scan settings are then accessible.



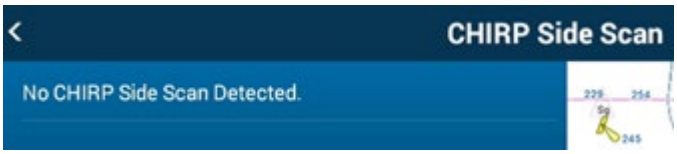
Settings Page



CHIRP Side-Scan Menu

Notes:

(1) If a CHIRP Side-Scan transducer is not detected, a message [No CHIRP Side-Scan Detected] is displayed.



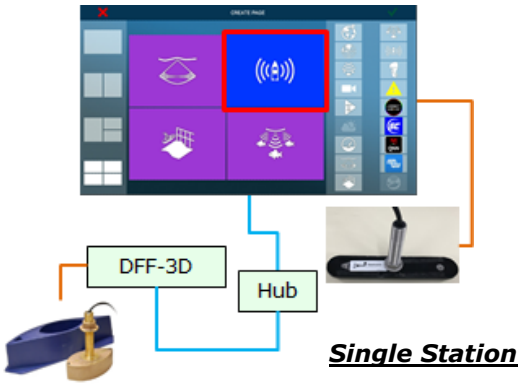
(2) **Heaving Correction** is **NOT** available with CHIRP Side-Scan. (It is also NOT available with the Side-Scan mode of a DFF3D.) Heaving Correction works with the Fish Finder for bottom sounding only.

4.2. Display Options

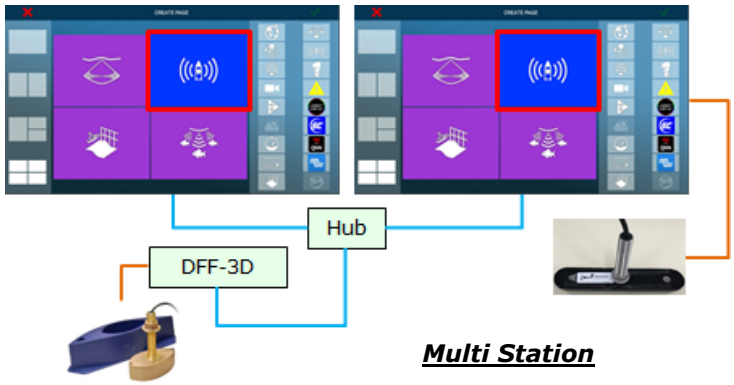
CHIRP Side-Scan pages are available in **Full**, **Half** (1/2-size), and **Quarter** (1/4-size) screen modes.

Note:

In a network including both CHIRP Side-Scan connected to TZT12F/16F/19F and DFF3D, only the CHIRP Side-Scan is selectable on Side-Scan screens. For the DFF3D, Cross Section, Triple Beam, and 3D History modes are available, Side-Scan from a DFF3D is **NOT** selectable.



Single Station

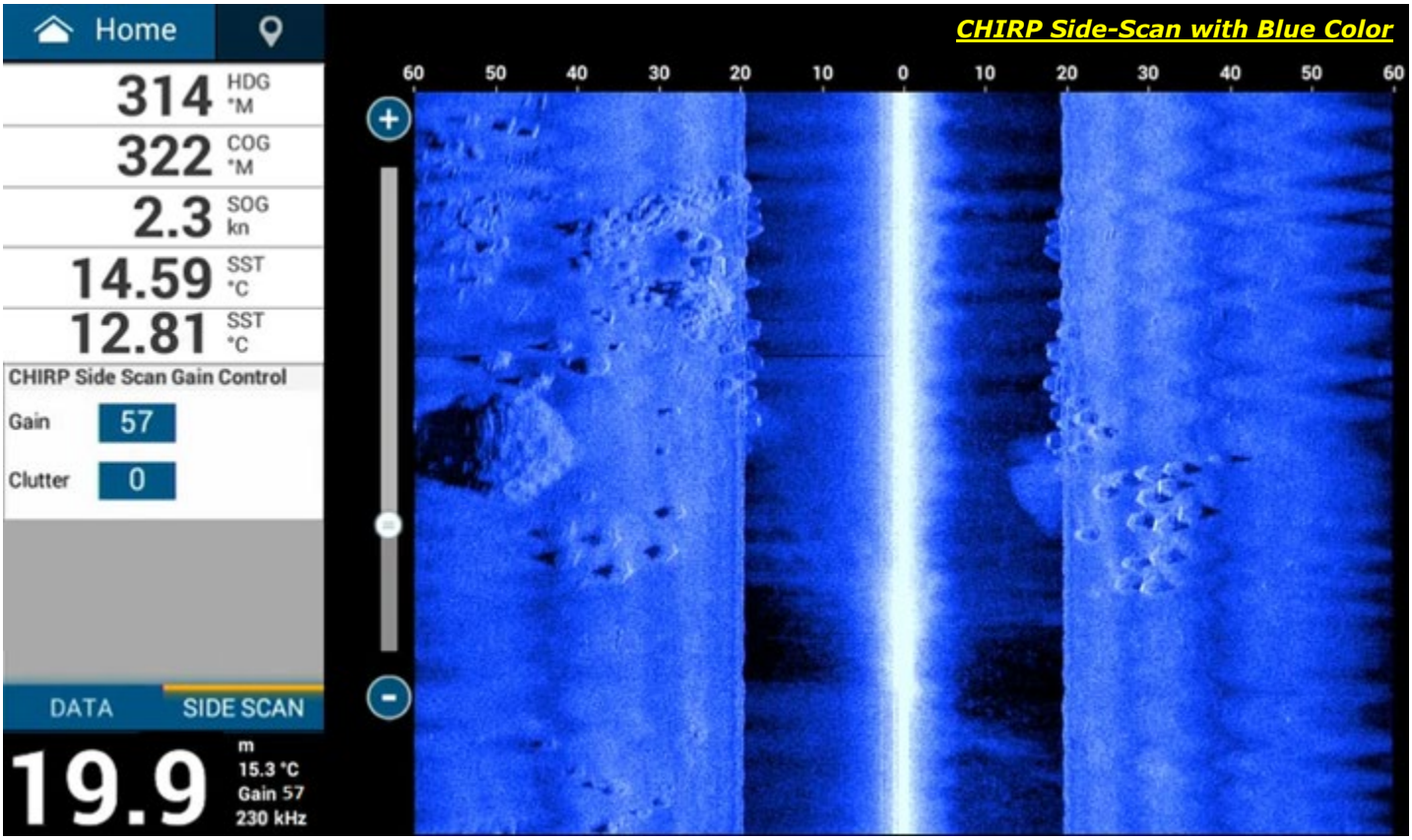


Multi Station

4.3. Operation on CHIRP Side-Scan Page

The basic operation is described in Full screen mode.

- With the Data Box shown, a new **SIDE-SCAN tab** is now available. The **CHIRP Side-Scan Gain Control** box allows you to easily access the gain adjustment.
- Gain and Clutter can be controlled via the Data Box, as well as the slide up Layer menu.
- Gain is adjusted **manually**. Auto Gain is not available.
- Depth is shown in large font, along with water temperature, gain value, and frequency indicated.
- Echo color options are **White**, **Blue**, **Brown**, and **Green.** Available in [Settings] – [CHIRP Side-Scan] – [**Echo Color**].



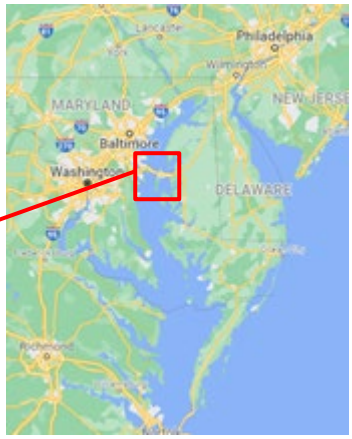
Layer menu is accessible by bottom edge swipe.

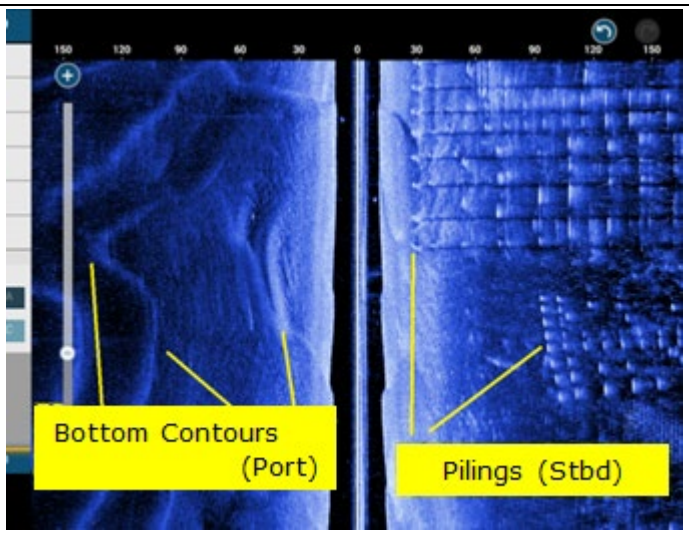
5. Proven Performance

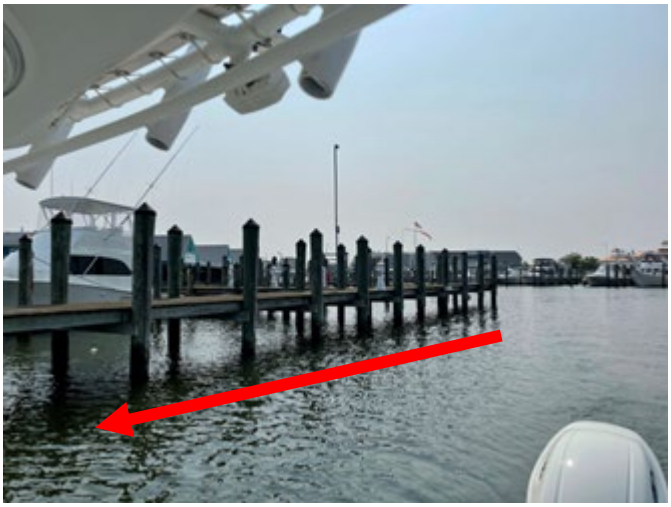
5.1. USA

Location:

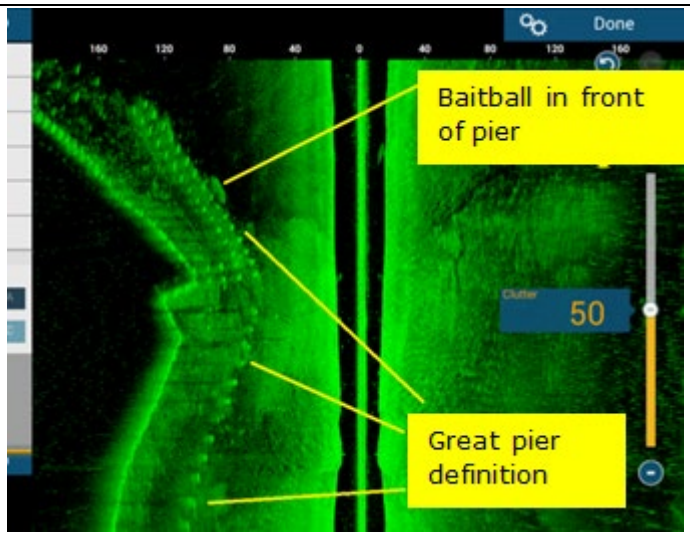
Kent Narrows, Maryland, USA



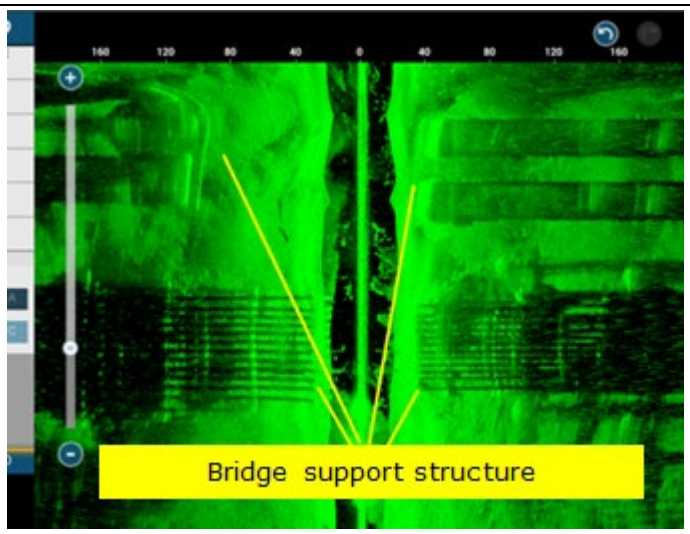




While pilings at the harbor is observed at starboard, you can also see the shape and contour of bottom at port.

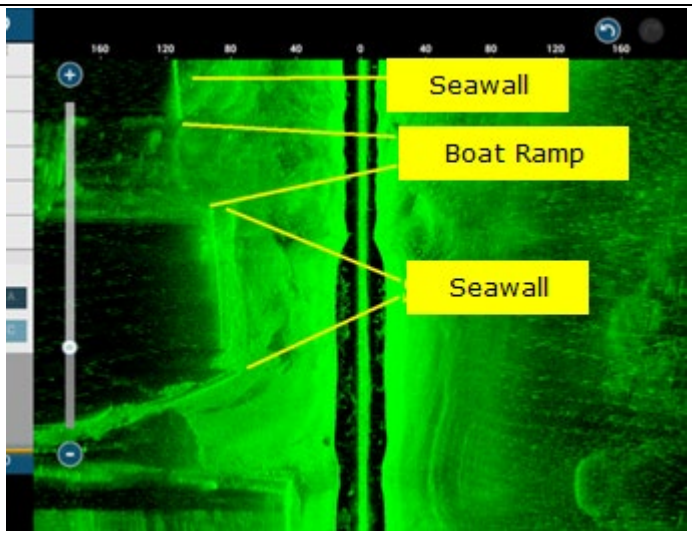


While detecting piers, you can also see a baitball present in front of the piers.



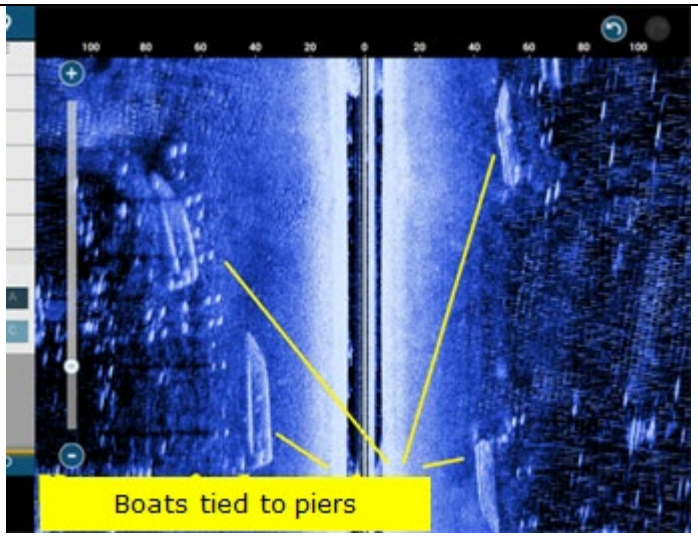
While the boat goes under the bridge, the bridge support structure is detected with its shape shown on the screen.

There is a narrow waterway along the bridge.

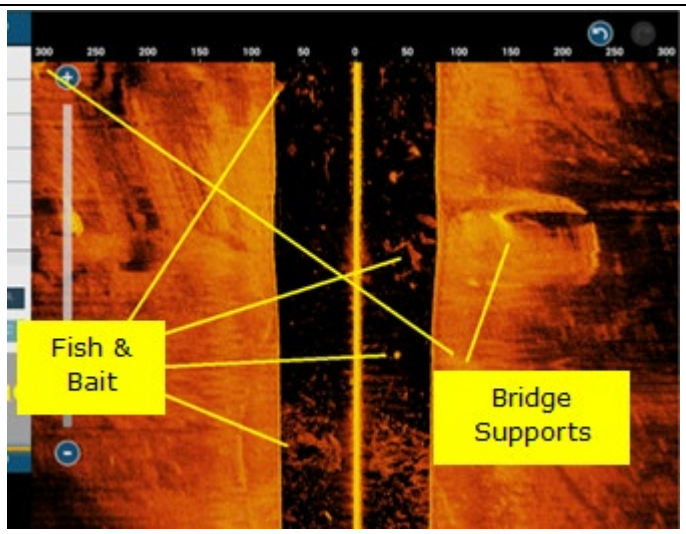


You can see the space of waterway between seawalls.

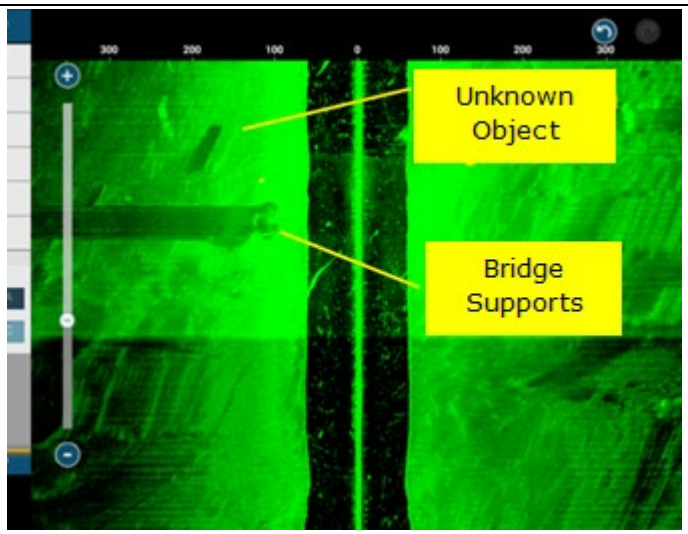
Boats tied to piers are observed at port and starboard.

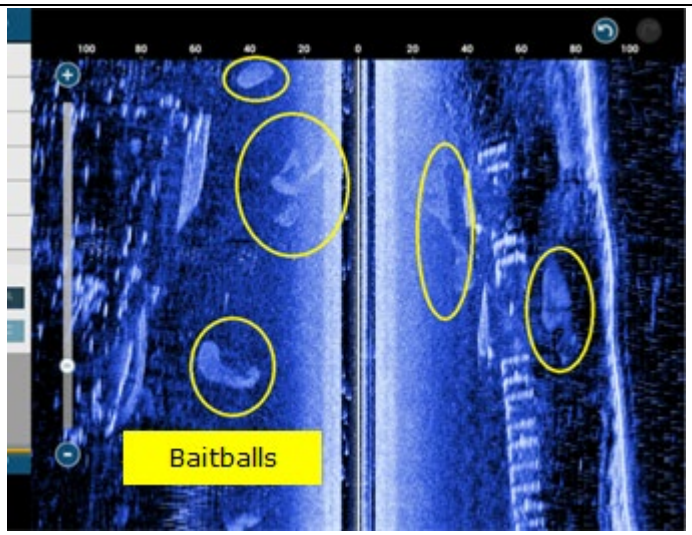


Hulls of each boat at the surface and supports of piers at the bottom are well detected.



While passing by the bridge support at starboard, a school of fish around the bridge support is also detected.

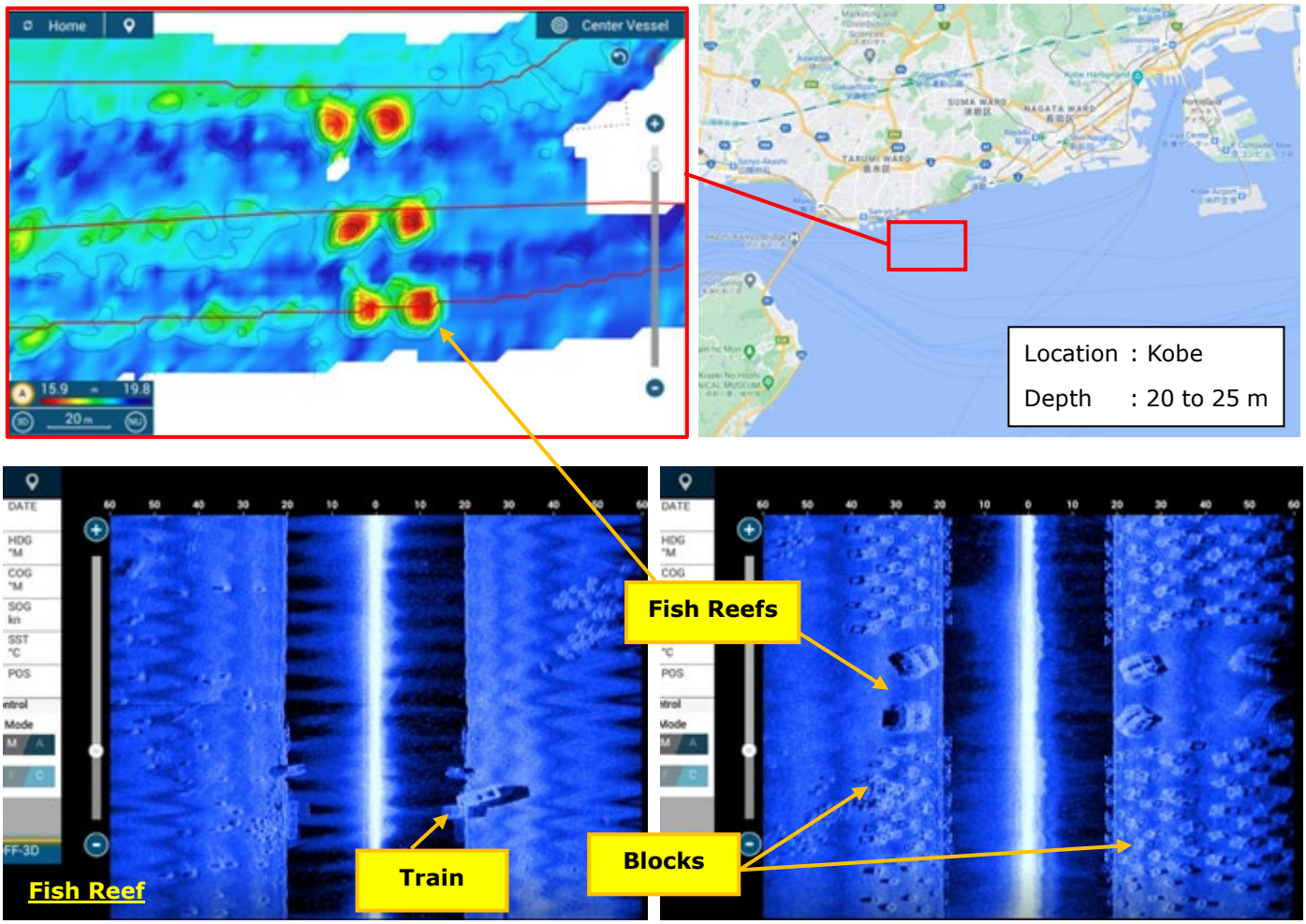




After passing the bridge support at port, baitballs spread at open sea are well detected at both port and starboard.

5.2. Japan

An area where PBG was previously recorded off the coast of Kobe is sounded using CHIRP Side-Scan. While the structures were originally located using a DFF3D in PBG, CHIRP Side-Scan shows the shape and layout of structures such as trains and blocks at the fish reef. Distance is in meters.



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