FURUNO
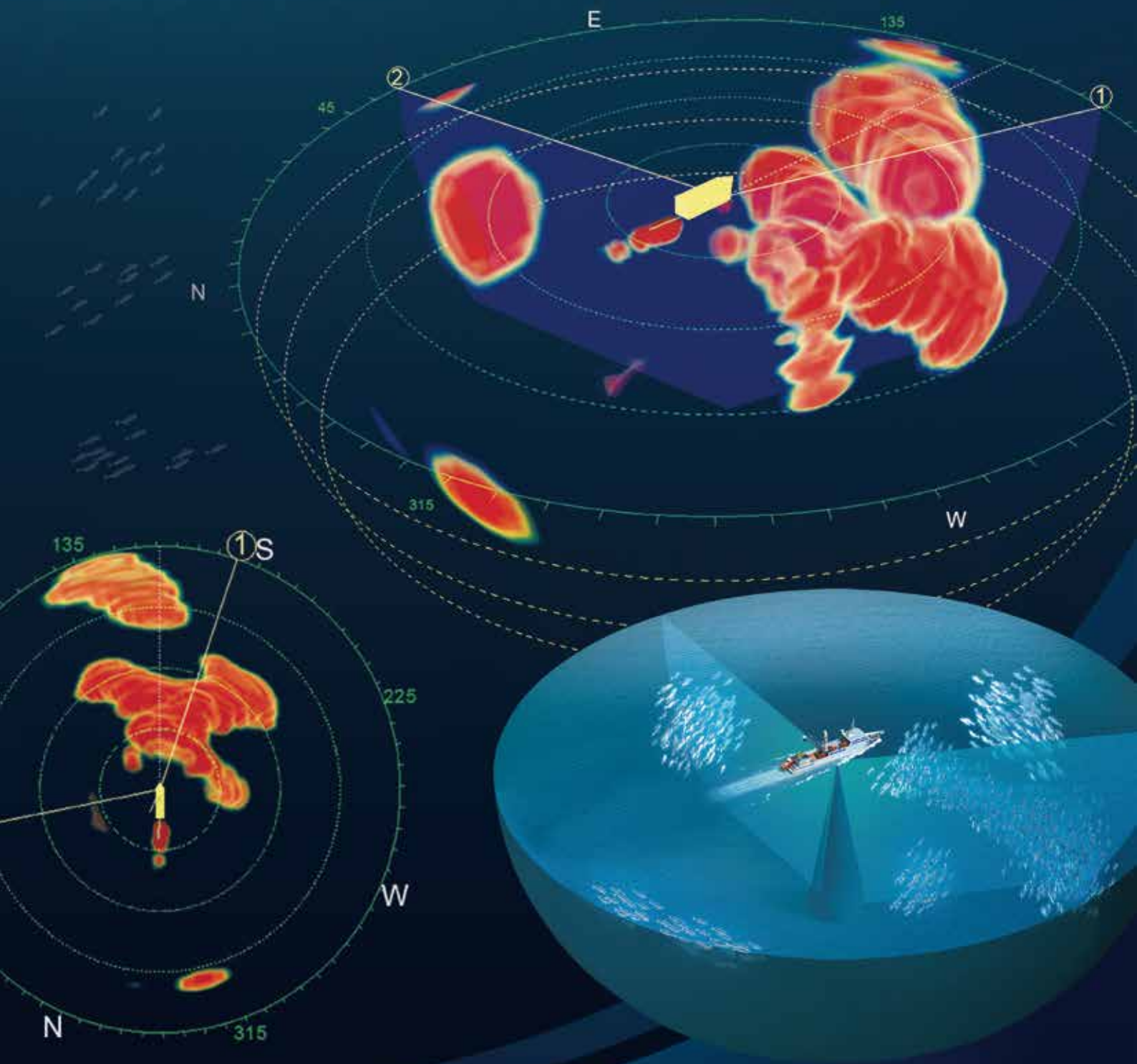
3D Sonar Visualizer™
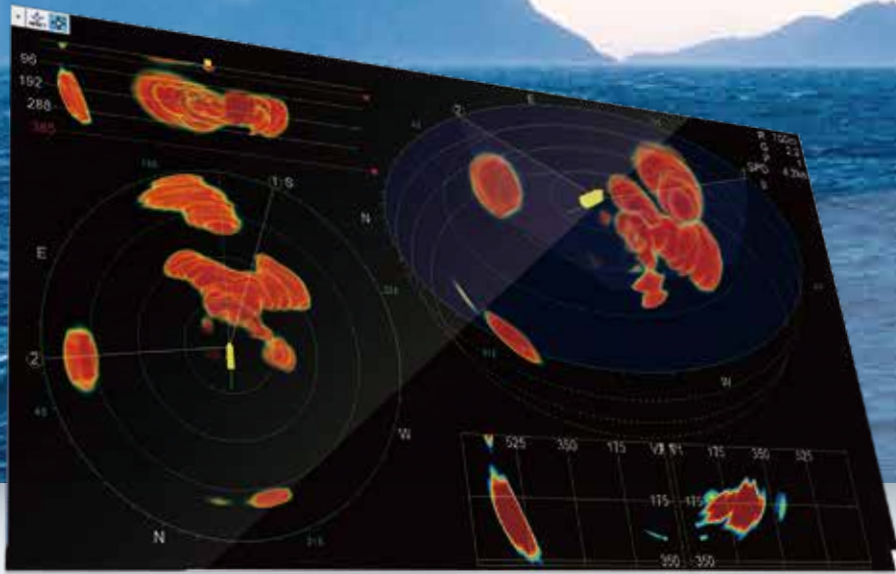
Model F3D-S

Make your sonar 3D

3D Sonar Visualizer™ F3D-S is a new product that works in conjunction with the FSV-25/FSV-25 MARK-2 to show fish and sonar information in 3 dimensions. It uses the hull unit of your existing sonar but then processes the information in a unique way to show fish, peaks and sea floor data in a 3 dimensional "real world" view. The seabed can be removed from the picture to leave just what you want to see... Fish. Clearly see the size and shape of midwater marks to assess the best way to fish them and with careful adjustment of the simple depth line control delete the seabed echos to visualize fish schools close to the sea floor.

▶ Fish schools of surface to middle layer can be observed at the same time.

- Clear to see the exact distribution of fish schools at a glance
- Easy to deduce the optimum tilt angle for the horizontal mode
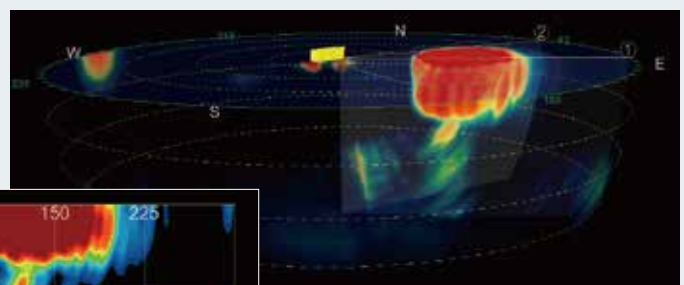- Simple and reliable monitoring of any object underwater

▶ Movement of fish schools can be viewed instantly.

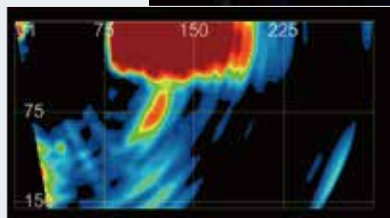3D Sonar Visualizer™ allows fishermen to
- Prevent by-catch
- Anticipate fish escape
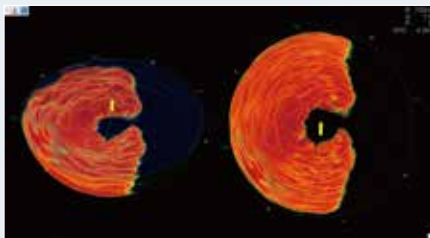
This picture shows the escape behavior of a fish school.

This picture seems to show cod feeding on capelin. A small school of fish is clearly observed below the capelin school.

▶ **All-around 3D visualization of fish schools and gear.**

▶ **Store and replay both screen images and equipment settings.**

▶ **4 Display Views: 3D, Top View, Side View and Vertical Slice.**

▶ **InstantAccess bar™ for direct access to menus.**

▶ **Easy and immediate entry of common marks: Echo Area, Event, Purse Net, Trawl, etc.**

▶ Comparison between Conventional 2D Sonar and 3D Sonar Visualizer™

In 2D view it can be difficult to get a clear understanding of the height or depth of a fish school without careful use of the tilt control. This becomes even harder in shallow water. Using 3D Sonar Visualizer™ F3D-S allows you to remove the seabed from the picture and gain a very clear understanding of the shape, height and depth of the fish mark.
3D Sonar Visualizer™ F3D-S also allows you to clearly see the way the fish mark is lying in relation to the vessel both along and above the ground.
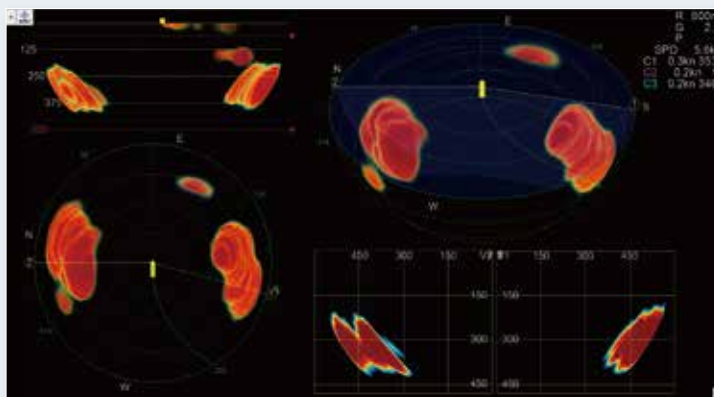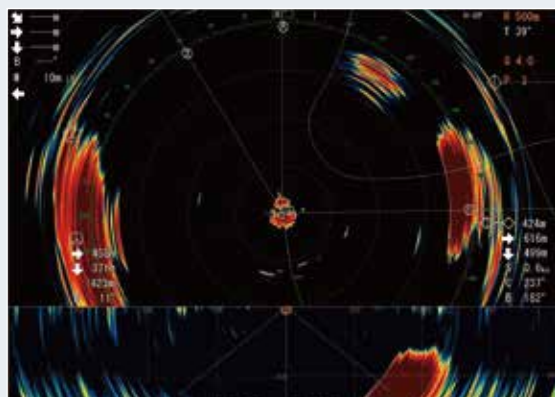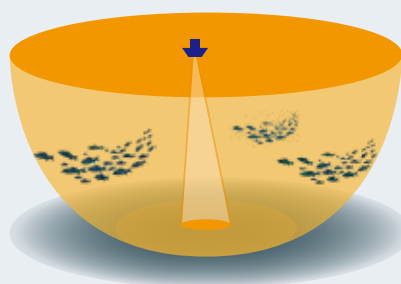
FSV-25/25 MARK-2

Tilt: arbitrary (The setting of the degree is needed.)
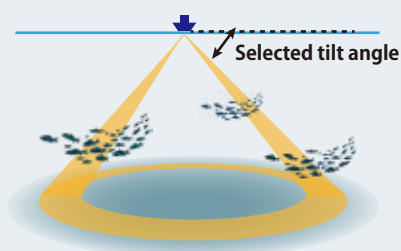
3D Sonar Visualizer™

Tilt: NA (The setting of the degree is not needed.)

Selected tilt angle

Screenshots taken at the same moment

◼ InstantAccess bar™

You can quickly access a series of tasks required for fishing without having to navigate through a deep hierarchy of menus.

Upper bar

- Reset the viewpoint
- Scale or move the view
- Enter echo region marks / event marks / purse net mark / trawl mark
- Set the seabed settings
- User program settings
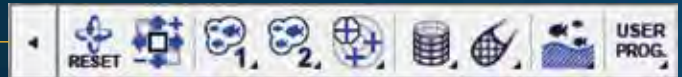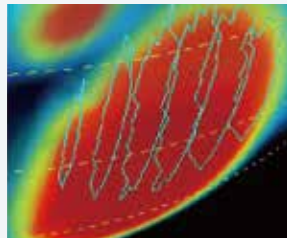
Echo Region Mark

The Echo Region Mark is a useful function for predicting the volume of a school of fish. In this function, once you clicked a point on the echo that is strongly displayed on the 3D-View, Top-View, or Side-View, the echo area including the point is displayed in yellow or cyan lines. The volume for echo region mark is displayed at the right of the screen.

| VOL-1 | 5.44 |
| VOL-2 | 2.06 |

Volume for echo region mark 1 and 2
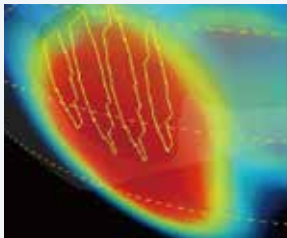
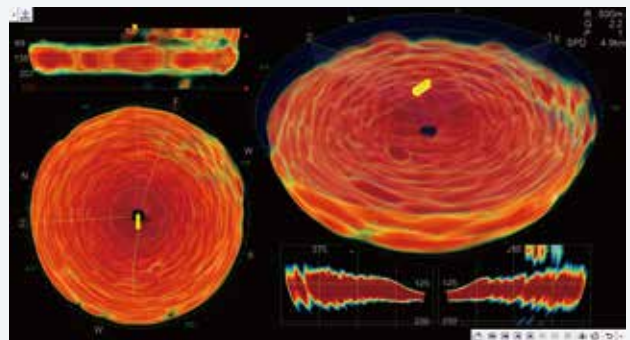Echo region mark 1 is displayed in yellow lines.
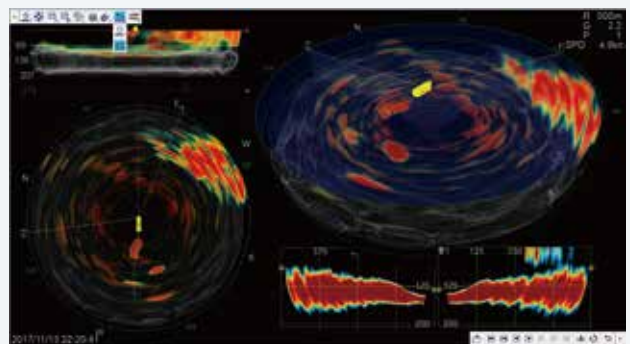
Echo region mark 2 is displayed in cyan lines.

Seabed Color Indication function

"Seabed Color Indication" makes it possible to mask a specific area (below yellow line). This allows easier identification of fish echoes close to the seabed. This function also allows discrimination of schools.
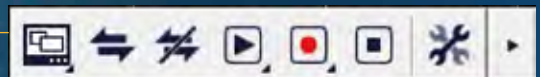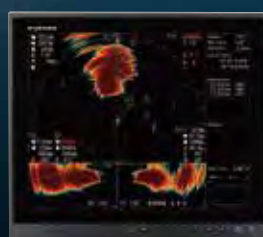
OFF

ON

Lower bar

- Save the View Setting (3 sets)
- Connect / disconnect the processor to FSV-25/25 MARK-2
- Start / stop data recording
- Replay the echo data

Connect / Disconnect button

It is easy to communicate with the FSV-25/25 MARK-2
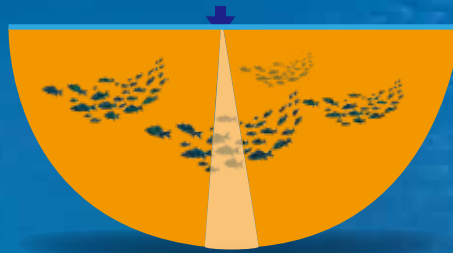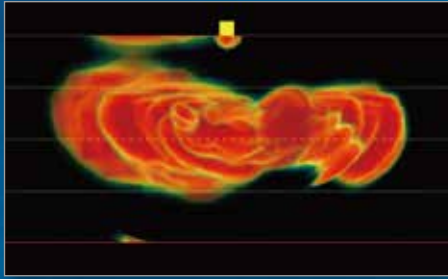
Model FSV-25/25 MARK-2   Model F3D-S

Side-View mode

The Side-View mode displays all echoes in a single vertical plane as seen from the stern of the ship. When the "Rotate Top-View/Side-View" mode is activated, this vertical section image is linked to the viewpoint of the 3D-View mode. This mode is used to measure the depth of a school of fish.
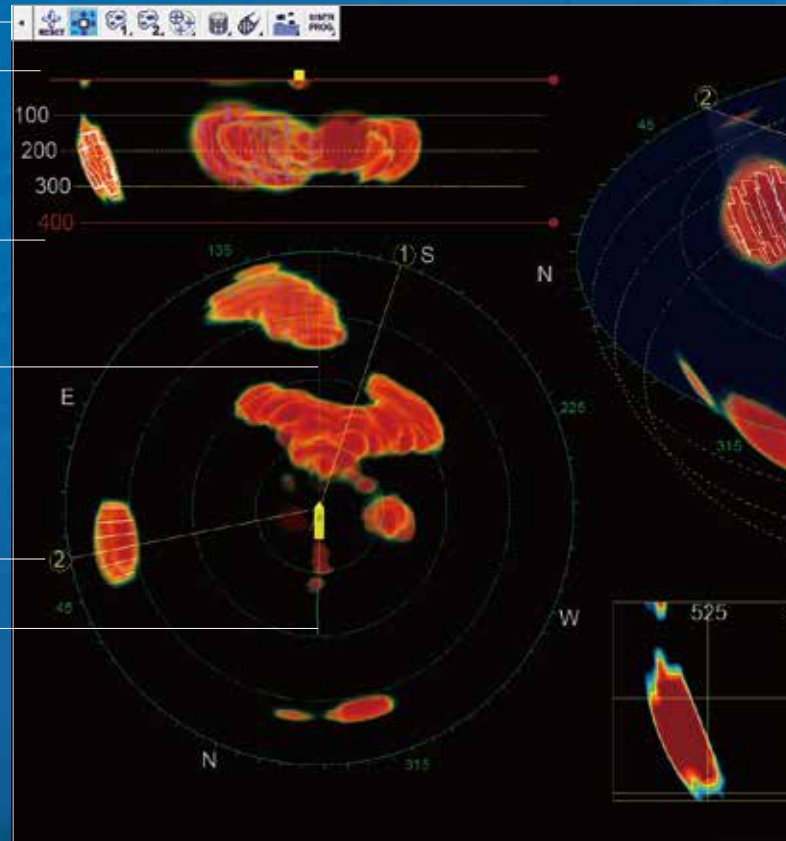

InstantAccess bar™ (Upper user menu)
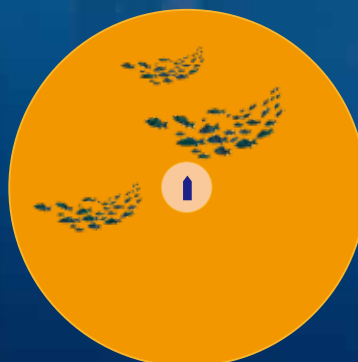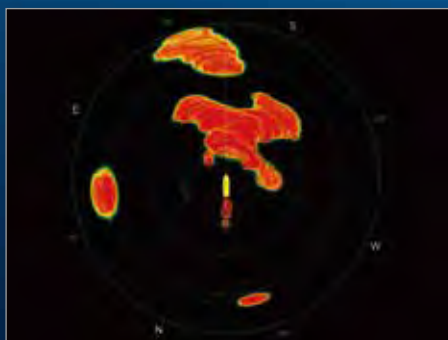
Depth line

**Heading line**

Vslice bearing mark

Track

Top-View mode

The Top-View mode displays all echoes in a single horizontal plane around your ship. This mode allows you to accurately assess the horizontal distance to a fish school and know its direction with precision.
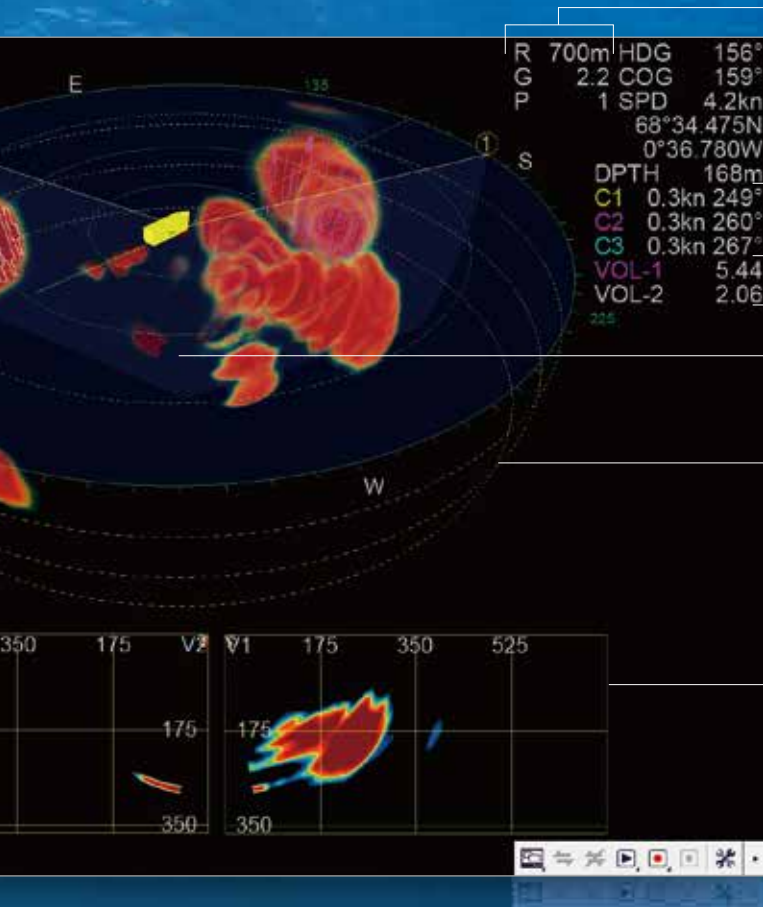
3D-View mode

The 3D-View mode allows you to view the surroundings from all angles. It is the ideal tool to have for an accurate 3D representation of the area.
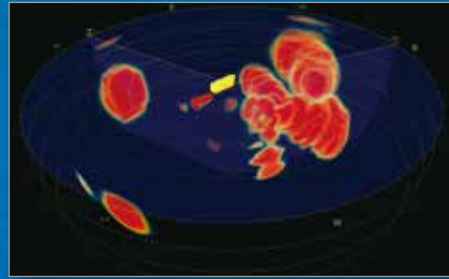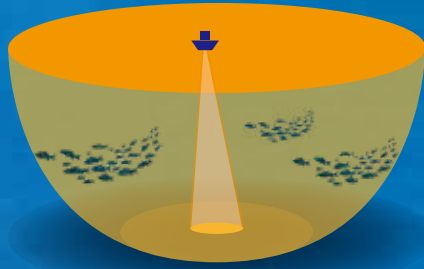
Sonar settings

External input data

Echo volume

Vslice bearing plane

Depth line

Range scale

InstantAccess bar™ (Lower user menu)

| R | 700m | HDG | 156° |
G	2.2	COG	159°
P	1	SPD	4.2kn
			68°34.475N
			0°36.780W
		DPTH	168m
C1	0.3kn	249°
C2	0.3kn	260°
C3	0.3kn	267°
VOL-1		5.44
VOL-2		2.06

Vslice-View mode

The Vslice-View mode shows the echoes in a vertical plane and in a specific orientation, same as the vertical echoes of FSV-25/25 MARK-2. It can display vertical planes in two different directions.
The Vslice-View mode is very useful for viewing the echo in a vertical plane at a specific direction. In addition, it makes it possible to compare the depth of two targets located in two different directions.
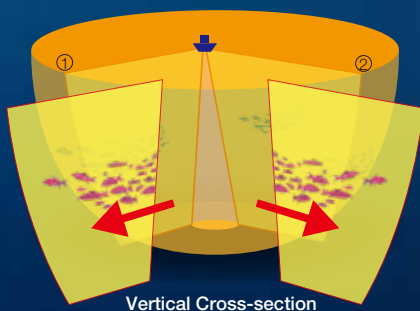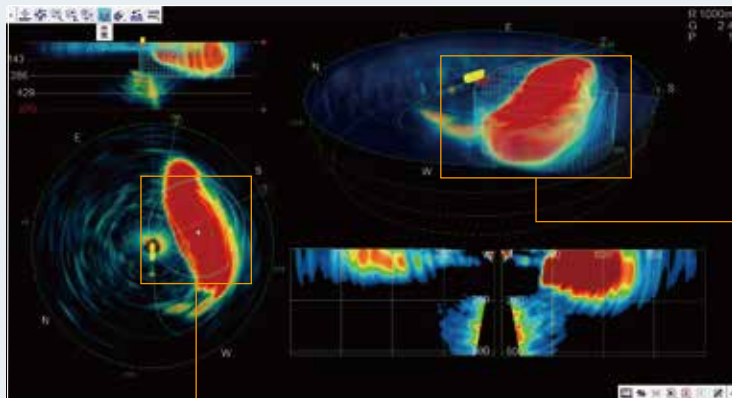

Vertical Cross-section
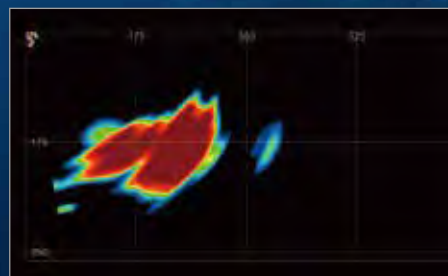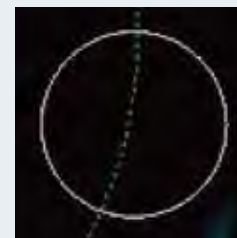
For Purse Seiner

Purse Net Mark

With the Purse Net Mark, you can generate a visual 3D representation image of the net. This virtual net in 3D allows you to compare size and depth of both the fish schools and the net for better and faster decision making.
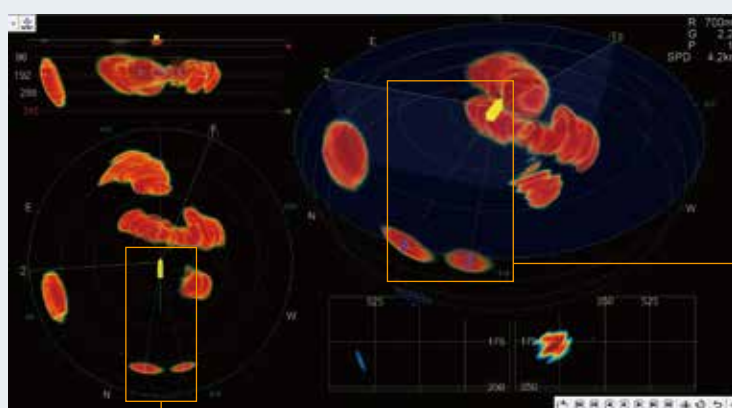

3D-View

Top-View

For Trawler

Trawl Mark

Display the following marks: Trawl door, net and wire in the 3D representation image. When a fish school is detected, trawl marks assist in positioning the doors and net for a big catch.

Distance from own ship to the center of the trawl door mark.

Trawl door mark

Trawl opening mark

Trawl filter: OFF	Trawl filter: ON	Trawl filter: ON
Trawl mark: ON	Trawl mark: ON	Trawl mark: OFF
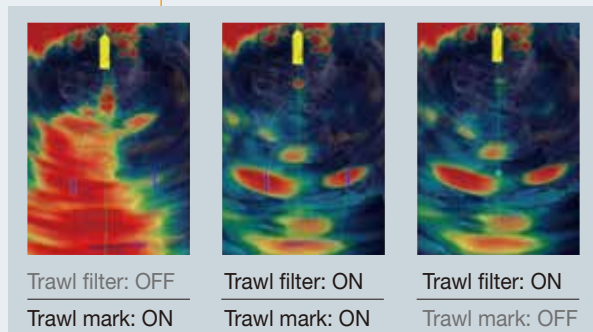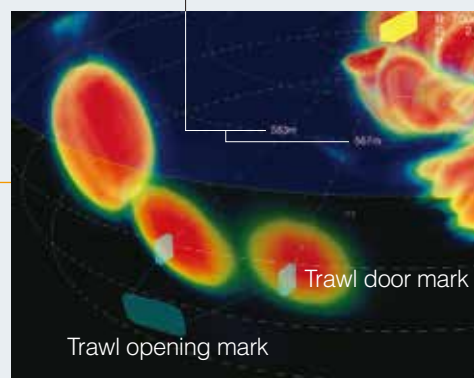
Trawl Filter

The echoes from trawl doors are emphasized and the echoes of ship wake and seabed are suppressed.

3D Sonar Visualizer™

Product name	3D Sonar Visualizer™
Model name	F3D-S

Specifications*

Frequency	20 kHz
Range	100 m to 5000 m (50 m step selectable)
Horizontal search range	0° to 360°
Vertical search range	0° to 60° (downward)
Presentation mode	3D-View, Side-View, Top-View, Vslice-View

* When connected to the FSV-25/25 MARK-2.

PC (requirements)

OS	Microsoft® Windows® 11 Pro/Home (English or Japanese)
CPU	Intel® Core™ i5 or better
GPU	NVIDIA GeForce® GTX1060 or better
Memory	Minimum 4 GB
SSD/HDD	Minimum 250 GB
I/O	Ethernet 100Base-T, USB2.0 or better (for USB protect key)

Standard Supply

1. CD-ROM	1 pc.
2. USB Protection Key	1 pc.
3. Installation Manual	1 pc.

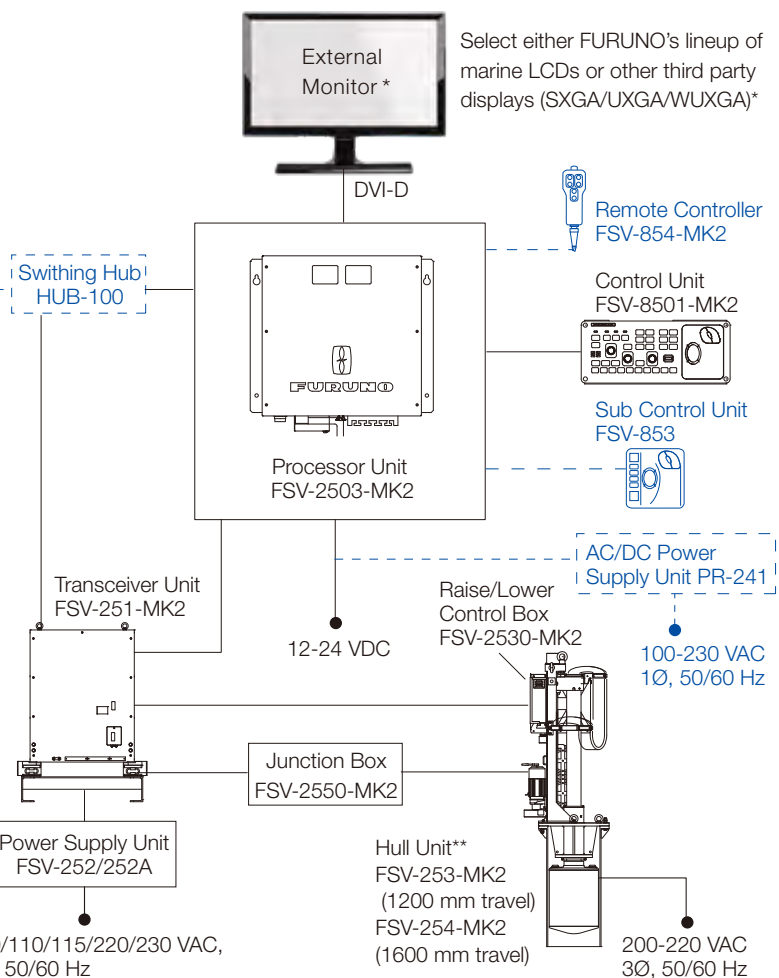## 3D Sonar Visualizer™

PC**

Program installed CD-ROM

USB Protection Key

* When using this software, the program files of
Processor Unit FSV-2503-MK2 and Transceiver Unit
FSV-251-MK2 need to be updated.
For more details, please ask local dealer or distributor.

** Local Supply

Connection diagram of FSV-25 MARK-2

External Monitor *

Select either FURUNO's lineup of marine LCDs or other third party displays (SXGA/UXGA/WUXGA)*

DVI-D

LAN

Swithing Hub HUB-100

Remote Controller FSV-854-MK2

Control Unit FSV-8501-MK2

Sub Control Unit FSV-853

Processor Unit FSV-2503-MK2

AC/DC Power Supply Unit PR-241

Transceiver Unit FSV-251-MK2

12-24 VDC

Raise/Lower Control Box FSV-2530-MK2

100-230 VAC 1Ø, 50/60 Hz

Junction Box FSV-2550-MK2

Power Supply Unit FSV-252/252A

Hull Unit**
FSV-253-MK2 (1200 mm travel)
FSV-254-MK2 (1600 mm travel)

200-220 VAC 3Ø, 50/60 Hz

100/110/115/220/230 VAC, 1Ø, 50/60 Hz

* When using dual monitors, confirm that they have identical resolution.

** The distance between the Raise/Lower Control Box and the Hull Unit can be extended with the optional Control Box Extension Box FSV-2560.

- - - - Local Supply

For more information about the FSV-25/25 MARK-2 and to visit the product page, please scan this QR code.