

FURUNO

OPERATOR'S MANUAL

3D Sonar Visualizer

Model **F3D-S**

(Option for FSV-25/FSV-25S)

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FOREWORD

Congratulations on your choice of the FURUNO 3D Sonar Visualizer F3D-S. We are confident you will see why the FURUNO name has become synonymous with quality and reliability.

Since 1948, FURUNO Electric Company has enjoyed an enviable reputation for innovative and dependable marine electronics equipment. This dedication to excellence is furthered by our extensive global network of agents and dealers.

Please carefully read and follow the recommended procedures for operation and maintenance.

Features

This software, installed in a PC, displays the 3D echo data obtained from the FURUNO model color scanning sonar FSV-25/FSV-25S. Hereafter, FSV-25 refers to FSV-25 or FSV-25S.

The main features of the F3D-S are as shown below.

- Fish schools of surface to middle layer can be observed at the same time.
- Movement of fish schools can be viewed instantly.
- 3D visualization of ship's surroundings.
- Storage and replay of picture and settings.
- Four views (3D-View, Top-View, Side-View, and Vslice-View) can be displayed on the screen.
- Relative position of fish schools, trawl doors, and net can be easily understood.
- InstantAccess bar™ for direct access to menus.
- Various marks (echo region mark, event mark, purse net mark, trawl mark, etc.) can be entered.

Program version no.

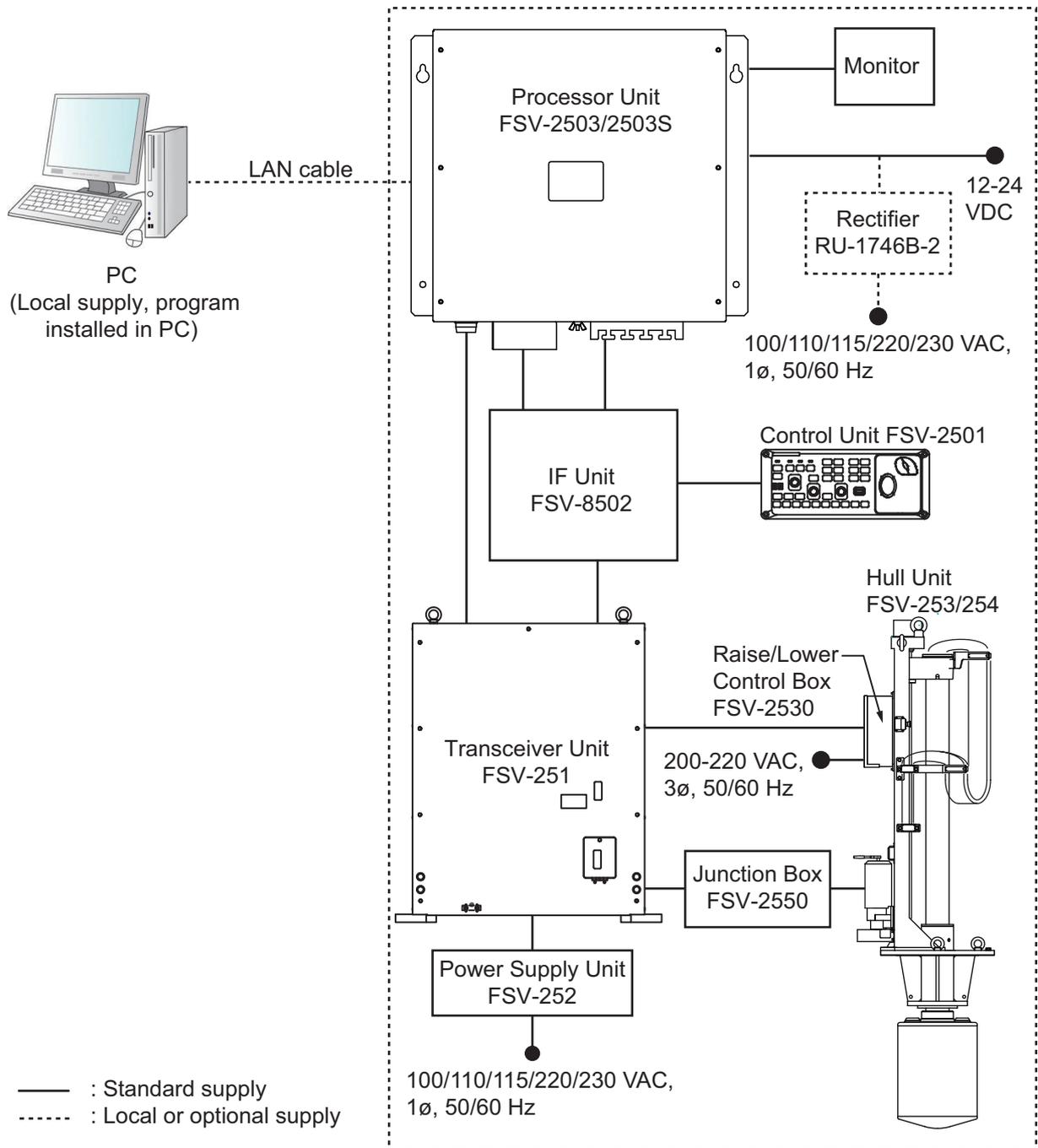
1050955-01.**

** denotes minor modifications.

Software used in this product

This product includes software to be licensed under the MIT. Please refer to the "OSS" directly in the supplied CD-ROM about the agreement of this software.

SYSTEM CONFIGURATION

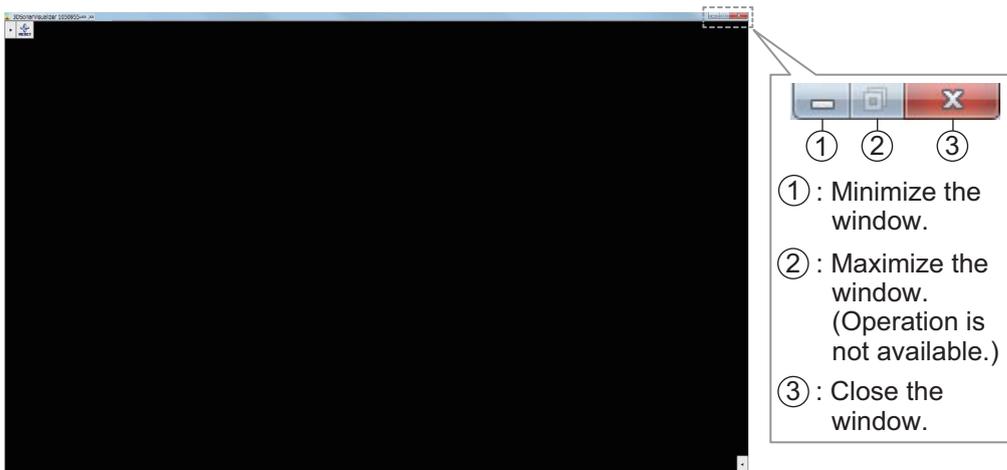


Color Scanning Sonar FSV-25/FSV-25S

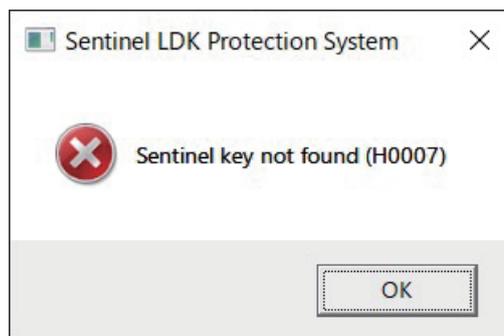
1. OPERATIONAL OVERVIEW

1.1 How to Start and Quit the Software

1. Turn the FSV-25 on.
2. Turn the PC on and login with administrator rights.
3. Insert the USB dongle into a USB port on the PC. The LED in the dongle lights red. The USB dongle is required to use this software. Take care not to lose it.
4. Double-click the “3D” shortcut icon on the desktop to start the software. After the start up is completed, the following screen appears.



Note: If the following message appears, click [OK] to deleted the message and then re-insert the USB dongle.

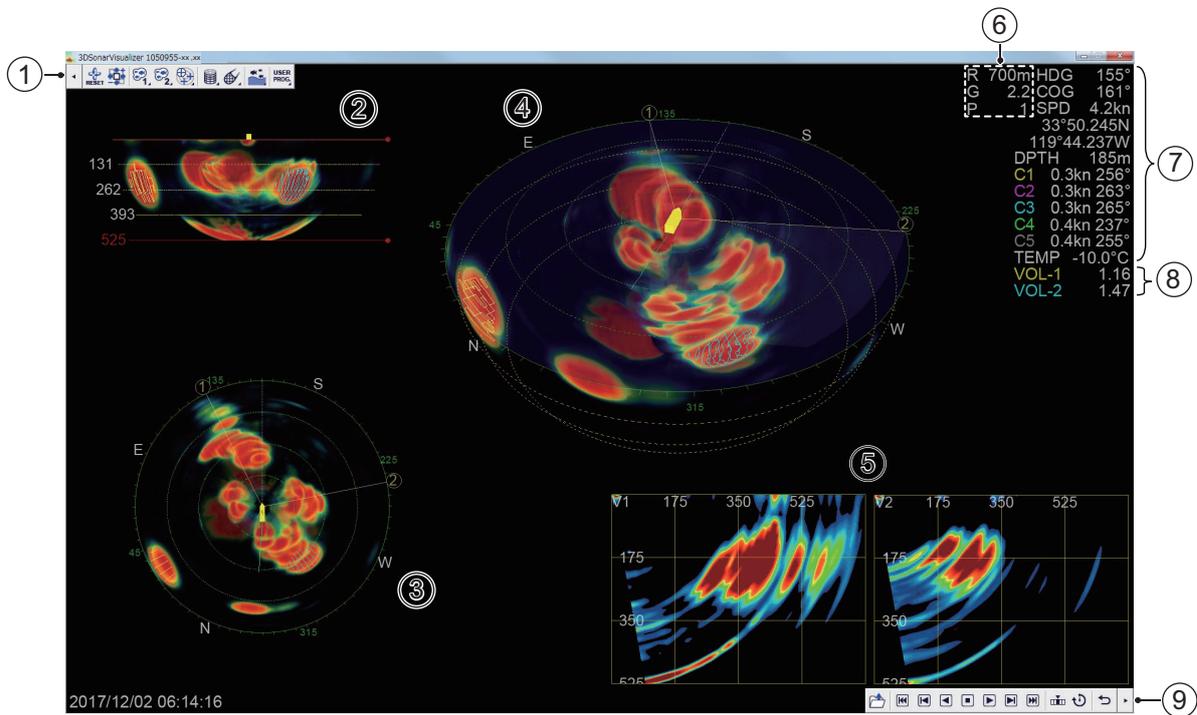


5. To quit the software, click the close button (x) at the upper right-hand corner of the screen. All setting information is saved to the folder “C: \ Users \ User name \ Documents \ FURUNO \ F3D-S”.

Note: If the information has not been saved, open the properties of the above-mentioned files and check that they are not “read only”.

1.2 Display Screen Overview

When the sonar is available and the F3D-S software is started, a screen, similar to that shown below, appears. There are four view modes; 3D-View, Top-View, Side-View, and Vslice -View.

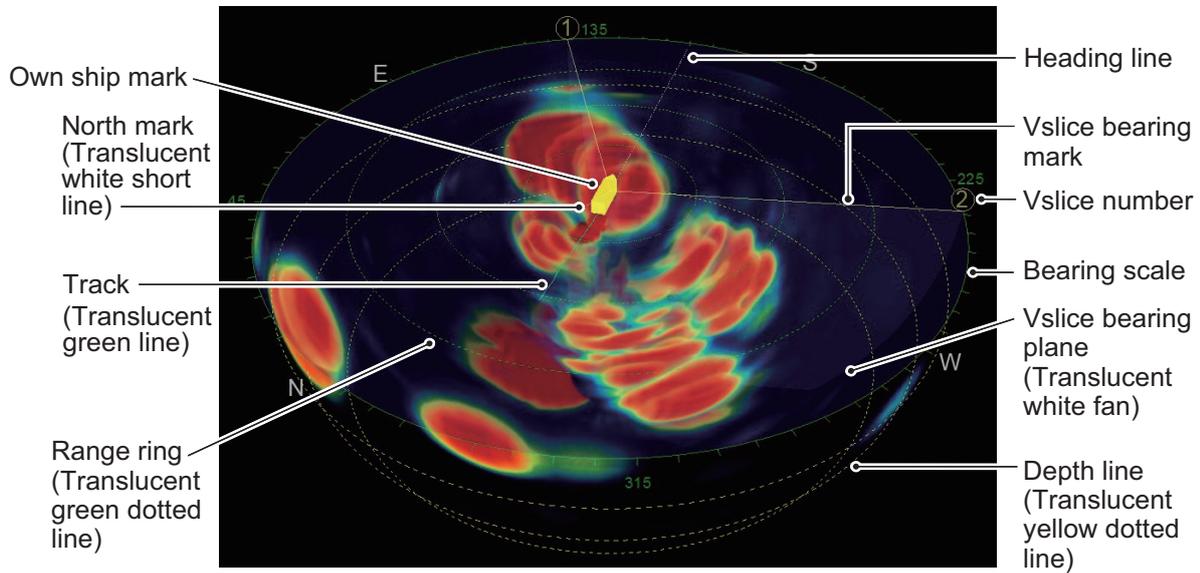


No.	Name	Description
1	Upper InstantAccess bar™	<ul style="list-style-type: none"> Click to show the upper user menu. Click to hide the upper user menu.
2	“Side-View” echo	<ul style="list-style-type: none"> Shows a horizontal view from stern side. This is the default setting. When [Rotate Top-View/Side-View] is turned on, shows a horizontal view from foreside of the screen. (See section 3.5.)
3	“Top-View” echo	Shows a “bird’s-eye-view” of the echoes around the ship.
4	“3D-View” echo	Shows a diagonal 3D view of the echoes.
5	“Vslice-View” echo	Shows vertical “slices” of echoes at the same orientation as the vertical settings on the FSV-25.
6	Settings of sonar	Shows the range, gain and user program number.
7	External input data	Shows the data output from external equipment connected to the FSV-25.
8	Echo volume	Shows the volume calculated from the echo region mark function.
9	Lower InstantAccess bar™	<ul style="list-style-type: none"> Click to show the lower user menu. Click to hide the lower user menu.

1. OPERATIONAL OVERVIEW

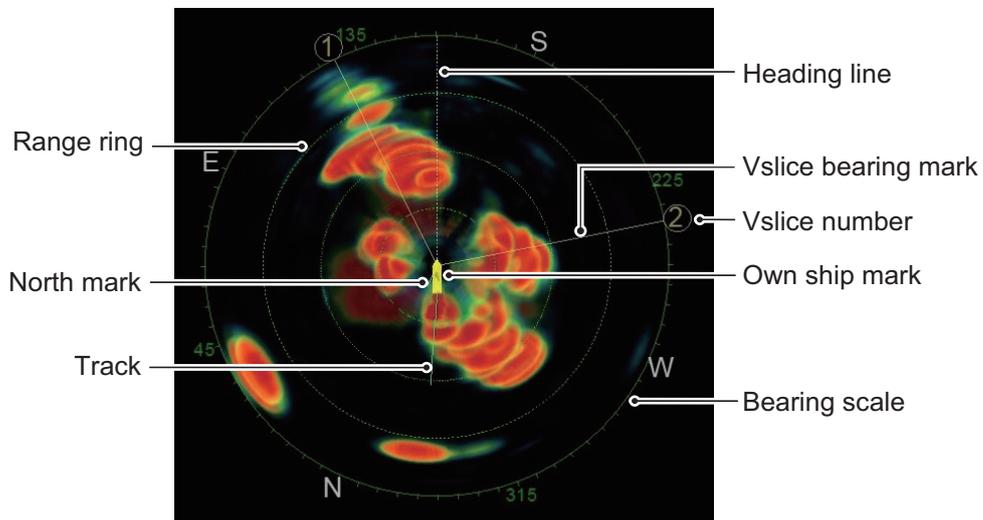
1.2.1 3D-View mode

The 3D-View mode shows a diagonal 3D view of the echoes. You can change the viewpoint. For details, see section 1.4. The 3D-View mode is useful for viewing the entire three-dimensional area around own ship.



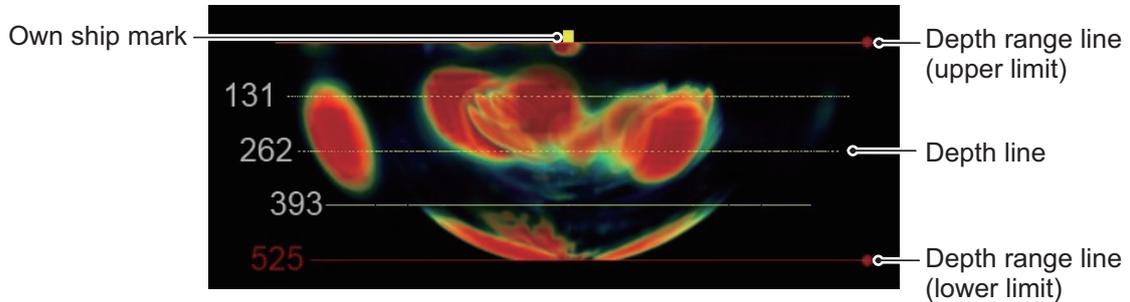
1.2.2 Top-View mode

The Top-View mode shows a “bird’s-eye-view” of the echoes around the ship. The Top-View mode is useful for measuring the horizontal distance and direction to the fish school.



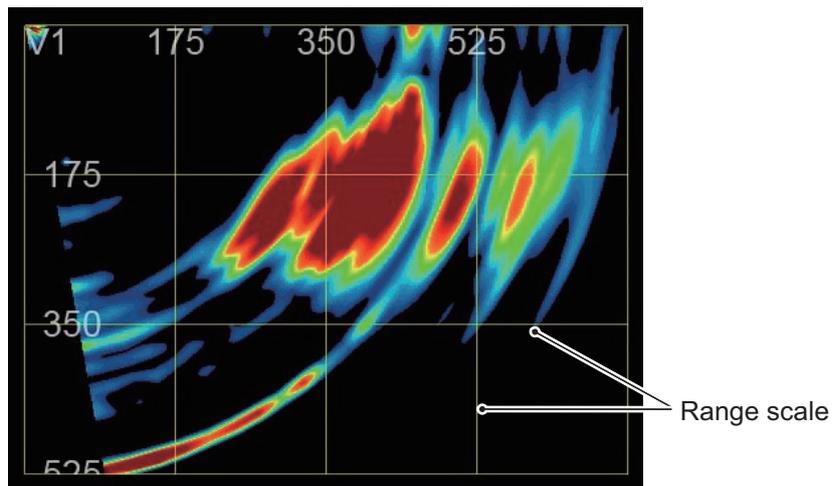
1.2.3 Side-View mode

The Side-View mode shows a horizontal view from stern side. This is the default setting. When [Rotate Top-View/Side-View] is turned on, the Side-View mode shows a horizontal view from fore-side of the screen. (See section 3.5.) The Side-View mode is useful for measuring the depth of the fish school.



1.2.4 Vslice-View mode

The Vslice-View mode shows vertical "slices" of echoes at the same orientation as the vertical settings on the FSV-25. You can display two-directional Vslice views. The Vslice-View mode is useful for detecting the fish school distribution in a specific direction. Also, this mode is useful for comparing the depth of two targets in the different direction.

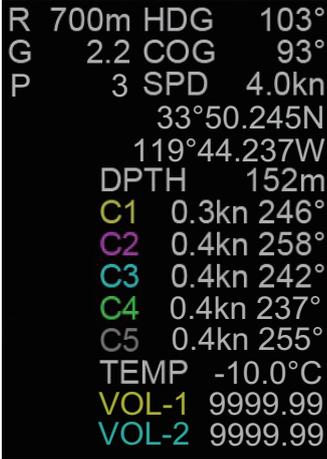


1. OPERATIONAL OVERVIEW

1.2.5 Other indication

The following data are displayed at the top right of the screen.

- Sonar settings: Shows the range, gain and user program number.
- External data: Shows the data received from external equipment.
- Echo volume: Shows the volume calculated from the echo region mark function.

<u>Sonar settings</u>		<u>External data</u>	
- R: Range (100 m to 5000m)			- HDG: Heading
- G: Gain (0.0 to 10.0)			- COG: Course over ground
- P: User program number (1 to 10)			- SPD: Speed
See section 1.5 to change the setting value for R, G or P.			- Latitude
			- Longitude
			- DPTH: Depth
			- C1 to C5: Current
			- TEMP: Temperature
			<u>Echo volume</u>
			- VOL-1: Echo volume for echo region mark 1
			- VOL-2: Echo volume for echo region mark 2

1.3 Operational Overview

1. Click  or  on the upper or lower InstantAcces bar™ to open the user menu.
2. Click an icon to execute the menu function. The selected icon is displayed in cyan. The icons that have a  at the bottom right have additional menus.
3. To deactivate a function, click the icon again. The color for the icon changes from cyan to gray.
4. To hide the user menu, click  or  on the upper or lower InstantAcces bar™.

1.4 How to Change the Viewpoint

You can change the viewpoint when no menu icons are selected.

To change the viewing angle, drag the 3D-View echo up or down.

To change the view-point origin, drag the 3D-View, Top-View* or Side-View* echo to the right or left.

*: This function is available on the Top-View and Side-View when checking the box for [Rotate Top-View/Side-View] in the Advanced Setting menu.

1.5 How to Set the Sonar

The range, gain and user program number are displayed on the top right of the screen.

To change the value, put the cursor on the [R], [G] or [P] area then spin the scrollwheel.

R	700m	← Range
G	2.2	← Gain
P	3	← User program number

- [R]: Shows the display range (setting range: 100 m to 5,000 m). When the FSV-25 operates in the H(orizontal)/V(ertical) alternate mode, the setting value is limited to the range of the FSV-25 in the V(ertical) mode or less.

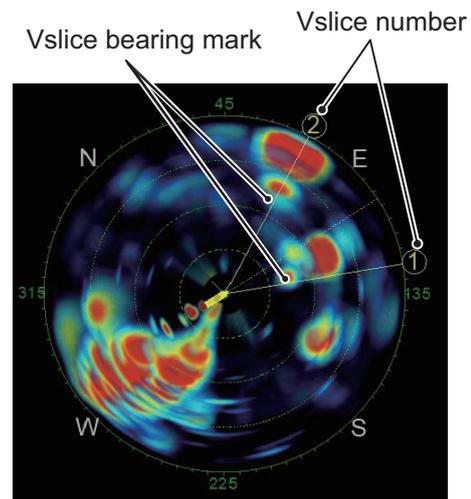
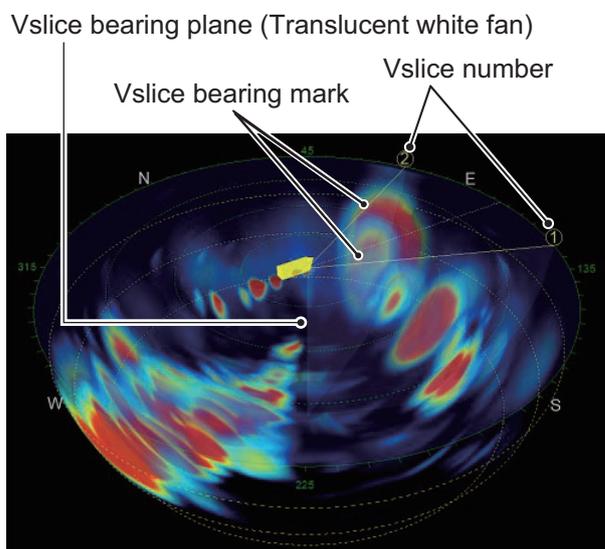
Note: When the FSV-25 is in the H mode or the H2 (horizontal combination) mode, the TX (transmission) interval of the FSV-25 is reduced depending on the range setting of the F3D-S. The TX interval does not decrease when V mode is in use.

- [G]: Shows the receiver gain (setting range: 0.0 to 10.0).
- [P]: Shows the user program number (setting range: 1 to 10). When the cursor is in the [P] area, the comment* for the selected user program number is displayed on the left.

*: You can set the comment about the menu settings for views including the view arrangement. For details, see section 2.8.

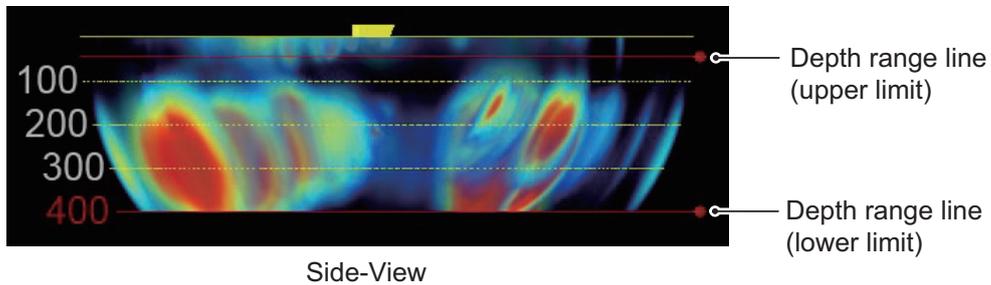
1.6 How to Set the Vslice Bearing Mark

To set the Vslice bearing mark on 3D-View or Top-View, click the Vslice number and then spin the scrollwheel, or drag the Vslice number. You can set the Vslice bearing mark while the Vslice number is displayed in cyan color.



1.7 How to Set the Depth Range Line

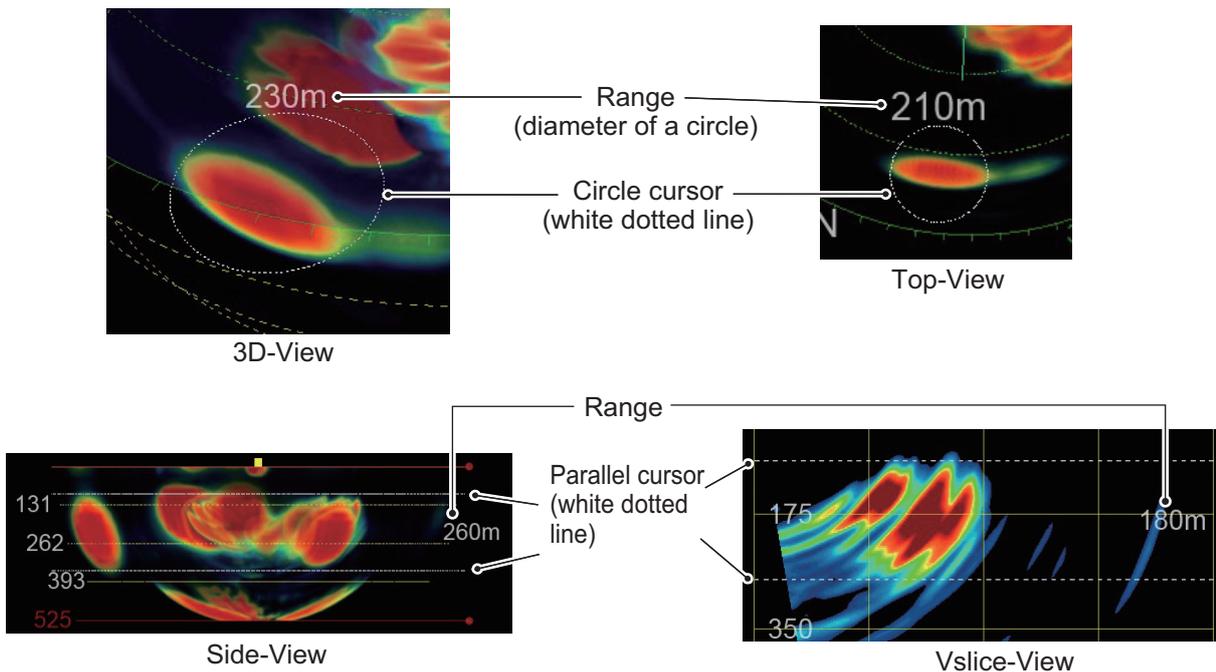
To set the depth range line on Side-View, click the depth range line for upper or lower limit and then spin the scrollwheel, or drag the depth range line. You can set the depth range line while the depth range line is displayed in cyan color.



1.8 How to Measure the Range by Range Cursor

There are two types of range cursor; circle cursor for the horizontal measurement and parallel cursor for the vertical measurement.

Click the scrollwheel on an area other than the menu icons and move the cursor on a view. Spin the scrollwheel to measure the range.



To cancel measuring, do one of the followings.

- Click the scrollwheel on an area other than the menu icons.
- When the Vslice number is displayed in cyan, click the Vslice number.
- When the depth range line is displayed in cyan, click the depth range line.
- When the seabed border line is displayed in cyan, click the seabed border line.

2. UPPER USER MENU

The upper InstantAccess bar™ is on the top left side of the screen. Click  to show the upper user menu. Click  to hide the upper user menu.



Upper user menus

Icon	Name	Description	Section
	Show	Shows the upper user menu.	1.3
	Hide	Hides the upper user menu.	1.3
	Reset Viewpoint	Resets viewpoint orientation. This mark is always displayed.	2.1
	Move/Zoom	<ul style="list-style-type: none"> Moves view by dragging. Adjusts the zoom by spinning the scrollwheel. 	2.2
	Echo Region Mark 1	Enters the echo region mark 1.	2.3
	Echo Region Mark 2	Enters the echo region mark 2.	2.3
	Event Mark	Enters an event mark on Top-View.	2.4
	Purse Net Mark	Enters the purse net mark on 3D-View or Top-View.	2.5
	Trawl Mark	<ul style="list-style-type: none"> Enter the trawl mark on 3D-View or Top-View. Sets the depth for the trawl mark on Side-View or Vslice-View. 	2.6
	Seabed Color	Displays seabed in specified color.	2.7
	User Program	Opens the user program menu.	2.8

The upper user menus, except for user program, are displayed by right-clicking on each view. Click an icon to execute the function. When the upper InstantAccess bar™ on the top left side of the screen is closed, the menu bar on the view disappears and the selected icon is displayed in cyan on the top left side of the screen. When the upper InstantAccess bar™ is open, the menu bar on the view disappears and the selected icon turns cyan on the upper InstantAccess bar™. The icons which are unavailable on a view are grayed out and not selectable. To delete the menu bar on a view, click the area out of a view.

2.1 How to Reset the Viewpoint

Click  to reset the viewpoint. The depression and azimuth of the viewpoint are reset to the setting for the currently selected user program.

2.2 How to Scale or Move the View

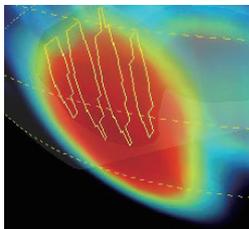
1. Click  to show the upper user menu.
2. Click .
3. **To scale the view**, put the cursor on a view and spin the scrollwheel.
To move the view, put the cursor on a view and drag the view.
4. Click  to deactivate the function.
5. Click  to hide the upper user menu.

Note: When you click , the position and size for each view is reset to the setting for the currently selected user program.

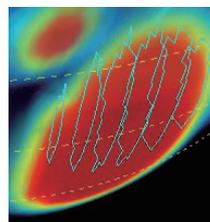
2.3 How to Enter the Echo Region Mark

You can enter the echo region mark on 3D-View, Top-View, or Side-View.

1. Click  to show the upper user menu.
2. Click  or .
3. Click the point on the echo that is strongly displayed in 3D-View, Top-View, or Side-View. The echo area, including the point clicked, is displayed in yellow or cyan lines.



Echo region mark 1 is displayed in yellow lines.



Echo region mark 2 is displayed in cyan lines.

The volume for echo region mark is displayed at the right of the screen.

VOL-1	2.00	Volume for echo region mark 1
VOL-2	0.16	

(Unit: 1,000,000 m³)

Note 1: You cannot mark an area designated as echo region 2 with echo region mark 1, and vice versa.

Note 2: When updating the echo display while echo region marks are displayed,

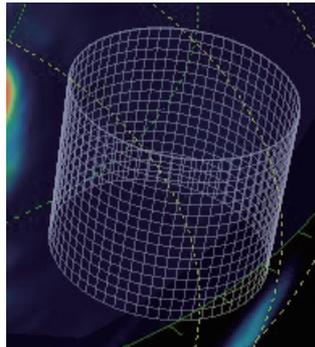
- if there are strong echo after updating near the position of the mark before updating, the echo region mark is displayed at the area of this echo.
- if there is no corresponding echo, the echo region mark is not displayed.

4. Click  or  to deactivate the function.
5. Click  to hide the upper user menu.

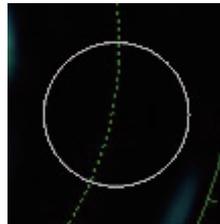
2.5 How to Enter the Purse Net Mark

You can enter the purse net mark on 3D-View or Top-View.

1. Click  to show the upper user menu.
2. Click .
3. Click the position on 3D-View or Top-View to enter the purse net mark in cyan color. When moving the cursor to an area other than the purse net mark, the purse net mark color changes to white.



3D-View



Top-View

Note: When updating the echo display, the purse net mark outside the on-screen field of view are not displayed.

4. Click  to deactivate the function.
5. Click  to hide the upper user menu.

How to move the purse net mark

To move the purse net mark, do one of the following:

- When  is selected, put the cursor on the purse net mark and drag the purse net mark to the desired position.
- When  is not selected, right-click the purse net mark then click [Move]. The  icon changes to the selected status. Drag the purse net mark to the desired position.

How to delete the purse net mark

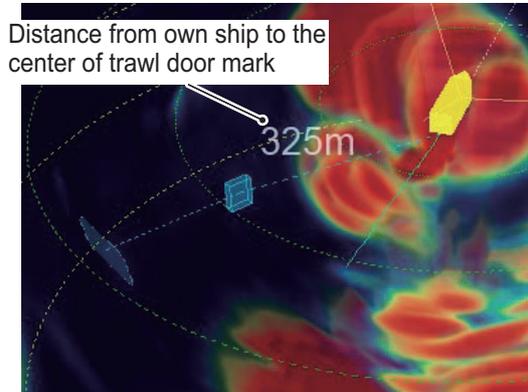
To delete the purse net mark, do one of the following:

- When  is selected, click .
- When  is not selected, right-click the purse net mark then click [Delete].

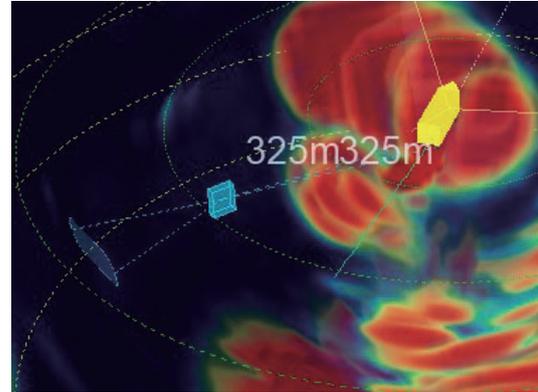
2.6 How to Enter the Trawl Mark

You can enter the trawl mark on 3D-View or Top-View.

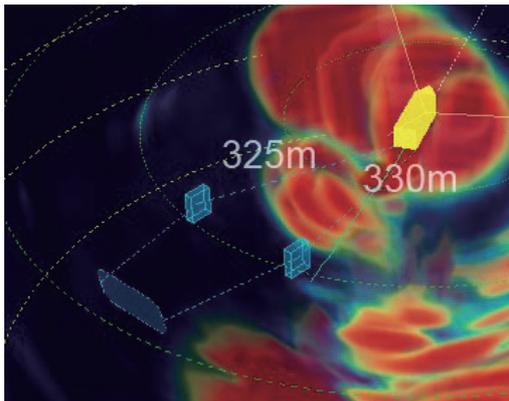
1. Click  to show the upper user menu.
2. Do the following steps on 3D-View referring to the figures.



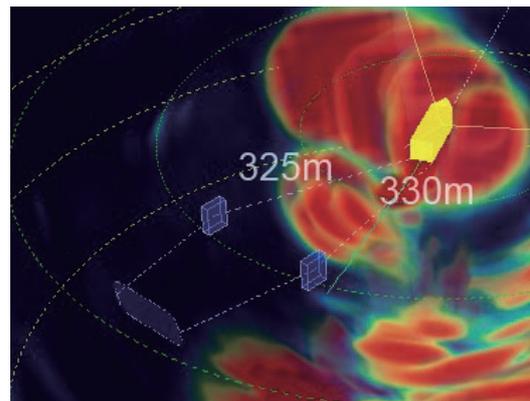
- ① Click  and then move the cursor to the view area.



- ② Click the position to place the trawl door marks.



- ③ Click another position to move one of two trawl door marks.



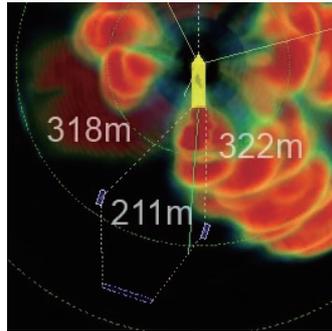
- ④ Move the cursor to the area other than the trawl door marks.

To reset the trawl mark, right-click a trawl door mark and click [Reset]. You can start from step ①.

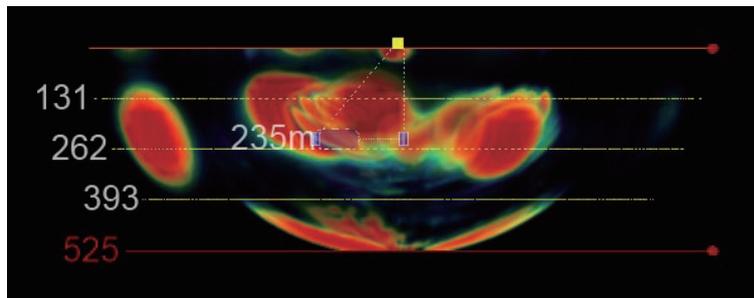
- 3D-View: The direct distances from own ship to the center of each trawl door are displayed in numerical values.

2. UPPER USER MENU

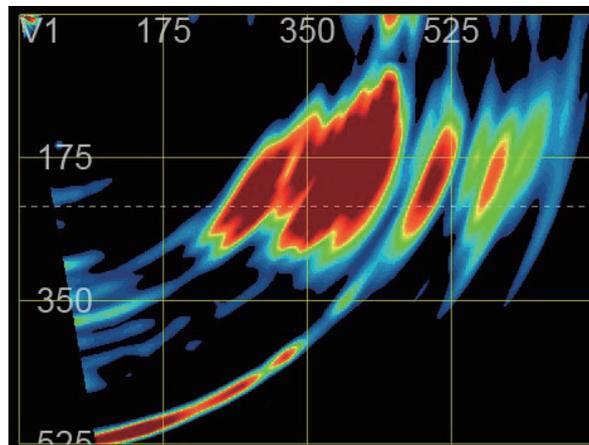
- Top-View: The horizontal distances from own ship to the center of each trawl door are displayed in numerical values. Also, the distance between two trawl doors is displayed in numerical value.



- Side-View: The depth for the center of trawl door is displayed in numerical value (default: 0 m).



- Vslice-View: The depth for the center of trawl door is displayed in cyan color, or white dotted line. When the cursor is on this line or a trawl mark, this line is displayed in cyan color. On other occasions, this line is displayed in white.



3. To set the trawl mark depth on Side-View or Vslicing-View, do one of the following:

On Side-View

- Put the cursor on a trawl door mark and drag the trawl door mark up or down.
- Click the location you want to set as the depth.

On Vslicing-View

- Put the cursor on the dotted line. The line color changes from white to cyan color. Drag this line up or down.
- Click the location you want to set as the depth.

4. Click  to deactivate the function. All numerical indications related to the trawl mark are removed.
5. Click  to hide the upper user menu.

How to change the horizontal position for trawl mark

To change the horizontal position for trawl mark, do one of the following:

- When  is selected, put the cursor on a trawl door mark and drag the trawl door mark to the desired position.
- When  is not selected, right-click a trawl door mark then click [Move]. The  icon changes to the selected status. Drag the trawl door mark to the desired position.

How to delete the trawl mark

To delete the trawl mark, do one of the following:

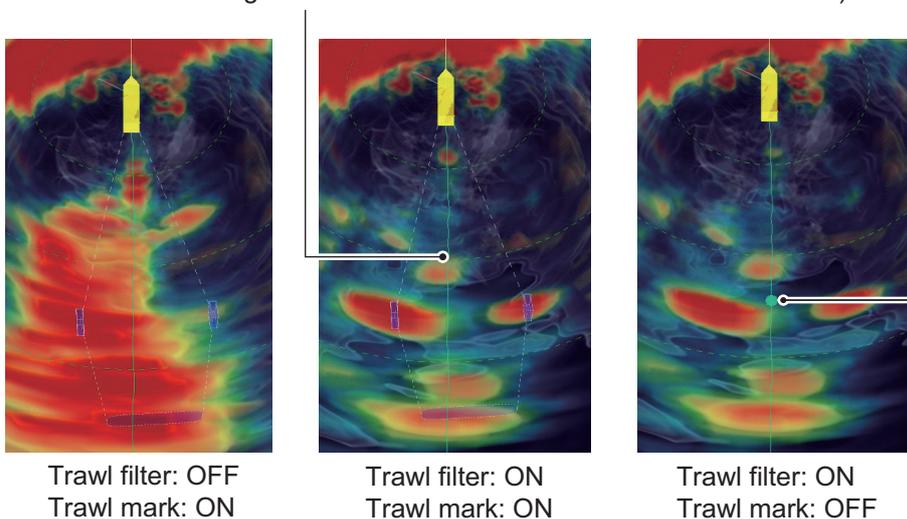
- When  is selected, click .
- When  is not selected, right-click a trawl door mark then click [Delete].

Trawl filter

The trawl filter function detects the trawl doors. The echoes from trawl doors are emphasized and the echoes from fish school and seabed are suppressed.

Note: The trawl filter can selectively detect the trawl doors in the specified direction. However, in some cases, where the trawl doors are at the edge of the detection area, the trawl doors may not appear on-screen. If this happens, disable the trawl filter.

Central orientation of trawl filter
(The orientation from own ship to the midpoint of the line connecting one trawl door mark to the other trawl door mark)



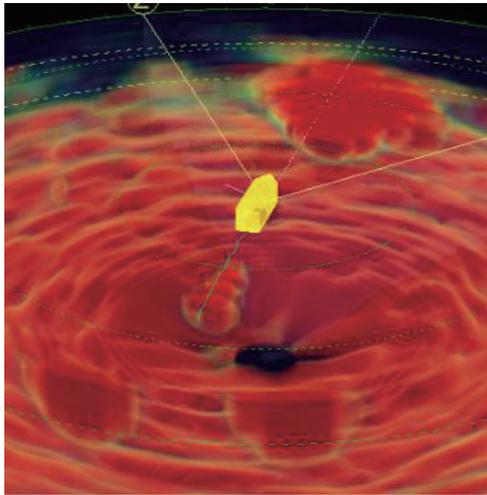
To activate the trawl filter, do the following.

1. Click  to show the upper user menu.
2. Click .
3. Click  to activate the trawl filter function. The icon is highlighted.

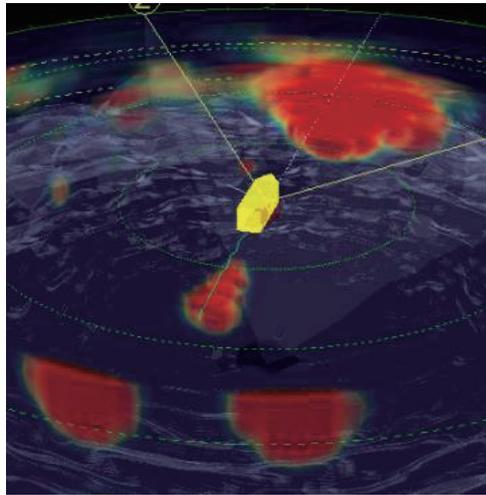
To deactivate the trawl filter, click  again.

2.7 Seabed Color

The seabed can be displayed in a specified color. You can set the seabed border line on Vslice-View.

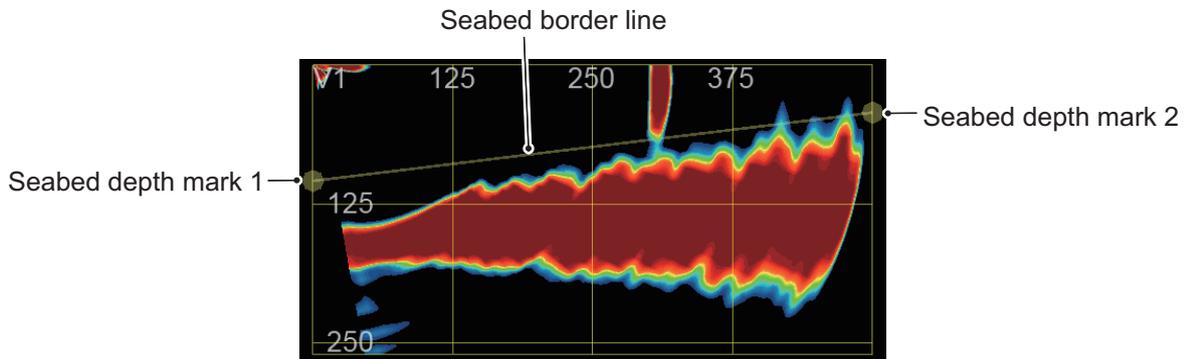


Seabed Color: OFF



Seabed Color: ON

1. Click  to show the upper user menu.
2. Click  to display the seabed border line on Vslicing-View.

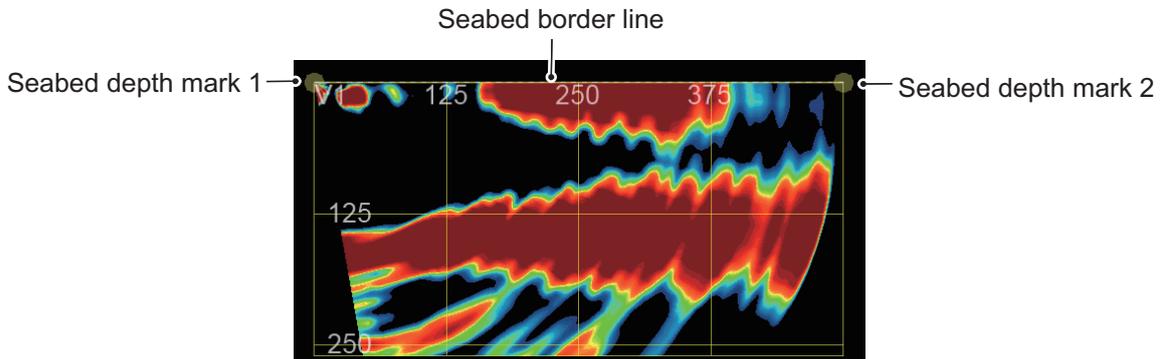


3. Move the cursor on the seabed border line. The line color changes from translucent yellow to cyan.
4. To set the depth for the seabed border line, drag seabed depth mark 1 up and down. To set the tilt for the seabed border line, drag seabed depth mark 2 up and down.

To deactivate seabed color function, click .

How to reset the seabed border line

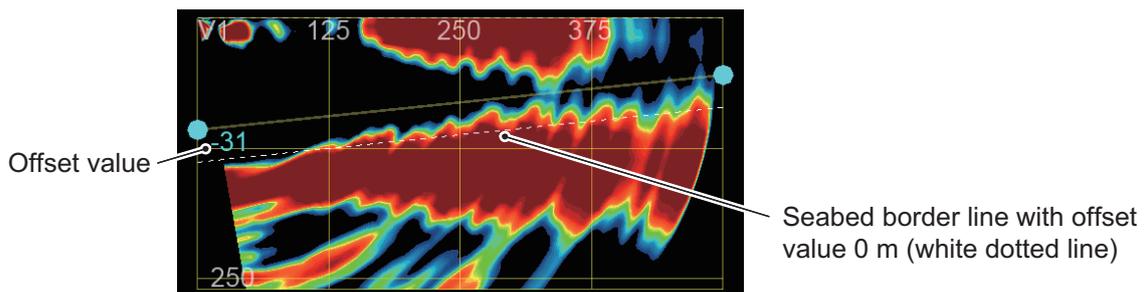
Click  and then click  to reset the seabed border line.



How to offset the seabed depth

You can offset the seabed depth using the scrollwheel.

1. When the seabed border line is displayed, click the line. The white dotted line that is the seabed border line with offset value 0 m is displayed.
2. Spin the scrollwheel to offset the seabed depth.



3. Click the area out of Vslice-View to hide the white dotted line.

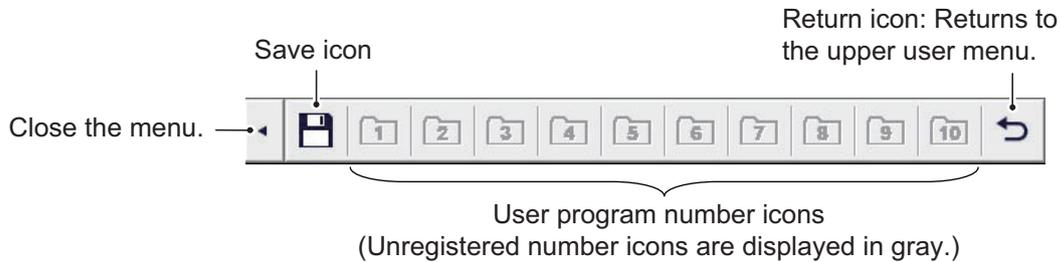
How to set the auto depth on

The auto depth function uses the detected water depth to calculate where to display the seabed border line. To activate this function, click  and then click .

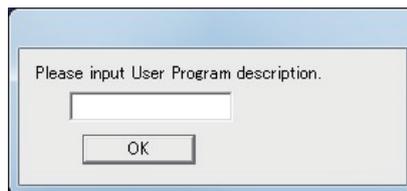
2.8 User Program

You can save up to 10 shortcut programs for views including the view arrangement.

1. Click  to show the upper user menu.
2. Click  to open the user program menu.



3. Click .
4. Click a user program number icon. The caution message "Are you sure to change registered settings?" appears.
5. Click [Yes]. The following dialog box appears.



6. Enter the comment for the user program (max. 64 characters) and then click [OK].
7. Click  to hide the upper user menu.

How to select a user program

Open the user program menu and then click the user program number icon among the registered numbers. The selected program number is displayed at the top right of the screen (see section 1.2.5).

3. LOWER USER MENU

The lower InstantAccess bar™ is on the bottom right side of the screen. Click  to show the lower user menu. Click  to hide the lower user menu.



Lower user menus

Icon	Name	Description	Section
	Show	Shows the lower user menu.	1.3
	Hide	Hides the lower user menu.	1.3
	View Setting	Opens the view setting menu.	3.1
	Connect	Connects the PC to the FSV-25/25S.	3.2
	Disconnect	Disconnects the PC from the FSV-25/25S.	3.2
	Replay	Opens replay menu.	3.4
	Start Recording	Records echo data.	3.3
	Stop Recording	Stops recording.	3.3
	Advanced Setting	Opens the advanced settings dialog box.	3.5

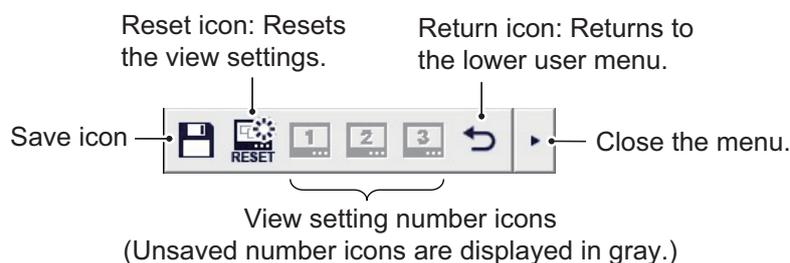
3.1 How to Save the View Setting

You can save up to three view settings. The following items can be saved.

- Positions of four view modes
- Size of four view modes
- Aspect ratio for Side-View and Vslice-View
- Orientation of viewpoint for Side-View and 3D-View
- Orientation of Vslice bearing mark for Vslice-View

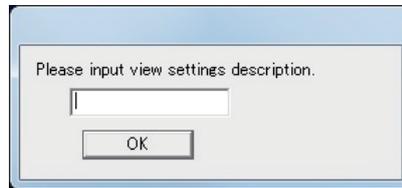
1. Click  to show the lower user menu.

2. Click  to open the view setting menu.



3. LOWER USER MENU

3. Click .
4. Click a view setting number icon. The caution message "Are you sure to change registered settings?" appears.
5. Click [Yes]. The following dialog box appears.



6. Enter the comment for the view setting (max. 64 characters) and then click [OK]. The comment set here is displayed when the cursor is placed on the appropriate view setting number icon.
7. Click  to hide the lower user menu.

How to select a view setting

Open the view setting menu and then click the view setting number icon among the registered numbers.

How to reset the view setting

Open the view setting menu and then click  to reset the view setting to the default.

3.2 How to Connect/Disconnect the PC to the FSV-25

1. Click  to show the lower user menu.
2. Click  to start communication with the FSV-25/25S. The color of the connect icon changes to gray.
Note 1: When the FSV-25/25S is not turned on, the gray indication of the connect icon is canceled 20 seconds after clicking .**Note 2:** This function is not available while replaying the echo data.
Note 3: When the communication is stopped without clicking , the caution message "Connection to sonar has been disconnected." appears. Click [OK] to delete this message.
Note 4: When the echo data is lost, the caution message "Data acquisition failed." appears. Click [OK] to delete this message.
3. To stop communication with the FSV-25/25S, click . The color of the disconnect icon changes to gray.

3.3 How to Start and Stop Data Recording

This software records the echo data of the FSV-25. The size of the echo data depends on the range setting. When the range is set to 1000 m, approximately 13 MB of the echo data can be saved per one transmission.

Note: When your main objective is data recording, connect a recording device and save the data on the recording device.

1. Click  to show the lower user menu.
2. Click  to start recording of the echo data.

The capture icon  appears above the record icon. Click  to save still images. One still image, that is generated from the echo data acquired by the transmission, is saved per one transmission along with recording of the echo data. To stop saving still images, click . To set the save destination folder, see section 3.5.

Note: When the capacity of the folder is full, recording of the echo data is stopped and the caution message "Recording has stopped due to insufficient space." appears.

3. To stop recording, click .
4. Click  to hide the lower user menu.

3.4 How to Replay the Echo Data

You can replay the recorded echo data.

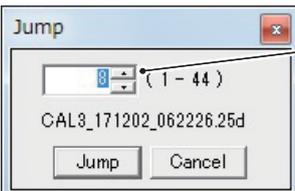
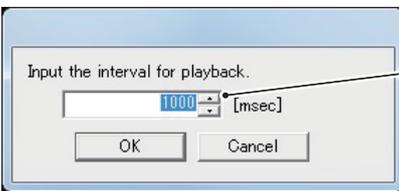
1. Click  to show the lower user menu.
2. Click  to open the replay menu.



3. Referring to the table below, click an icon to execute each function.

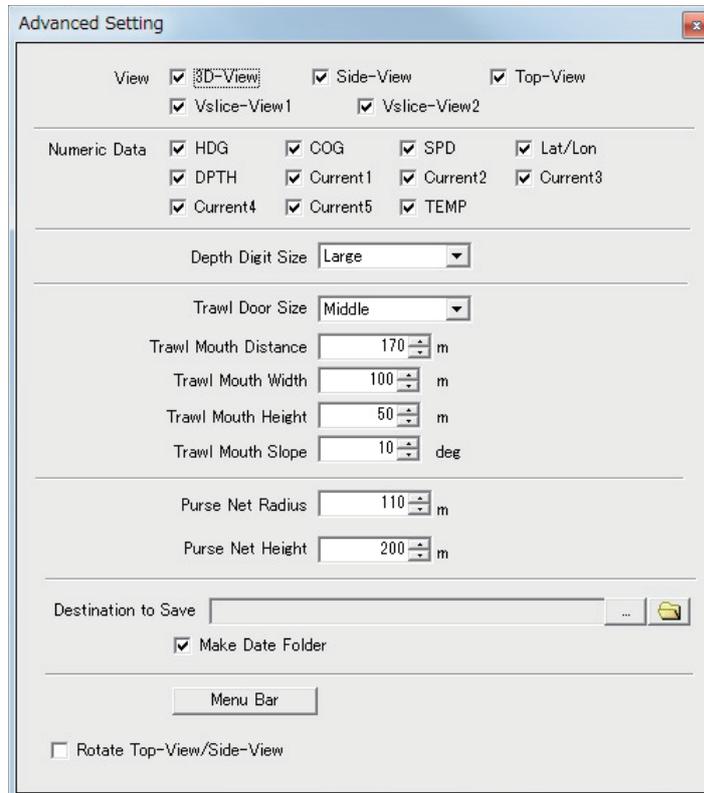
Icon	Description
	Opens the [Open] dialog box. Select the file and click [Open].
	Replays the first file.
	Replays the previous file of the last played file.
	Continuously replays the files from the previous file of the last played file in reverse order.
	Stops continuous replay.
	Continuously replays the files from the next file of the last played file in order.
	Replays the next file of the last played file.
	Replays the last file.

3. LOWER USER MENU

Icon	Description
	<p>Opens the [Jump] dialog box. Select the file number and click [Jump] to replay the selected file.</p> <div data-bbox="734 201 1029 392" style="border: 1px solid gray; padding: 5px; width: fit-content;">  </div> <p>Click ▲ or ▼ to select the file number.</p>
	<p>Opens the interval setting dialog box. Select the re-playing interval between each file on the millisecond time scale and click [OK].</p> <div data-bbox="670 425 1069 616" style="border: 1px solid gray; padding: 5px; width: fit-content;">  </div> <p>Click ▲ or ▼ to select the interval.</p>
	<p>Returns to the upper user menu.</p>
	<p>Closes the menu.</p>

3.5 Advanced Setting

1. Click  to show the lower user menu.
2. Click  to open the [Advanced Setting] dialog box.



3. Referring to the table below, set each menu item.

Menu item	Description
[View]	Check the box for each item you want to view on-screen.
[Numeric Data]	Check the box for each external data you want to view on-screen. ([HDG]: Heading, [COG]: Course over the ground, [SPD]: Speed, [Lat/Lon]: Latitude and Longitude, [DPTH]: Depth, [Current1 (to 5)]: Tidal current, [TEMP]: Temperature
[Depth Digit Size]	Select the character size for depth (Side-View and Vslice-View) or direction (3D-View and Top-View) among [Large], [Middle], or [Small].
[Trawl Door Size]	Select the size of the trawl door mark among [Large], [Middle], or [Small].
[Trawl Mouth Distance]	Set the distance from the trawl door mark to the trawl mouth mark (setting range: 10 to 2000 m, 10 m steps).
[Trawl Mouth Width]	Set the width of the trawl mouth mark (setting range: 10 to 400 m, 10 m steps).
[Trawl Mouth Height]	Set the height of the trawl mouth mark (setting range: 10 to 400 m, 10 m steps).
[Trawl Mouth Slope]	Set the tilt of the trawl mouth mark (setting range: 0 to 45 degrees, 1 degree steps). <div style="text-align: center;"> <p>Tilt of the trawl mouth mark to vertical direction</p>  <p>10 degrees 45 degrees</p> </div>
[Purse Net Radius]	Set the radius of the net mark (setting range: 10 to 1000 m, 10 m steps).
[Purse Net Height]	Set the height of the net mark (setting range: 10 to 1000 m, 10 m steps).
[Destination to Save]	<p>Opens the [Browse For Folder] dialog box. Select the save destination folder.</p>  <p>Folder path for the destination to save echo data</p> <p>Opens the contents of the folder displayed in [Destination to Save]. Note: When the folder displayed in the Destination to Save does not exist, the message "Auto Save Folder not exists. Do you want to set folder?" appears. Click [Yes] to open the [Browse For Folder] dialog box.</p>
[Make Date Folder]	<p>Check the box to make a folder named with date* when recording echo data or clicking .</p> <p>*: Example</p> <div style="text-align: center;"> <p>190601</p> <p>Year Month Day</p> </div>
[Menu Bar]	For qualified technician.
[Rotate Top-View/Side-View]	Check the box to rotate Top-View and Side-View.

4. TROUBLESHOOTING

This section provides simple troubleshooting procedures which the user can follow to restore normal operation. If you cannot restore normal operation, contact your dealer.

Problem	Possible cause	Remedy
The message "Sentinel key not found" appears and the software does not start.	The USB dongle is not inserted.	Check if the USB dongle is firmly inserted. The LED in the dongle lights red when the dongle is recognized correctly.
	The driver installation file is not installed.	Install the supplied file "HASPUUserSetup.exe". For details, see section 1.5 of the installation manual.
Pictures are not displayed.	The PC does not connect to the FSV-25.	Check the program version number for the FSV-25. For details, see section 1.2 of the installation manual.
		Check if the LAN cable is correctly connected. For details, see section 1.3 of the installation manual.
		Check if the IP address is correctly set. For details, see section 1.4 of the installation manual.
Pictures are slowly updated. Operation response is slow.	The PC does not meet the minimum requirements for the software.	Check the PC requirements. For details, see section 1.1 of the installation manual.
Pictures are not updated or freeze.	The FSV-25 is doing a test.	Pictures are not updated during a test in the FSV-25. Restart the software.
The message "Input password." appears when clicking [Menu Bar] in the [Advanced Setting] dialog box.	The menu items in the [Menu Bar] are for a serviceman.	For details, contact your dealer.
Can not change the range.	When the FSV-25 works in the vertical1 or vertical1 + vertical2 mode, the max range of this software is limited to the range of the FSV-25 in vertical mode.	
Pictures of the FSV-25 are slowly updated.	When the FSV-25 works in the horizontal1 or horizontal1 + horizontal2 mode, pictures of the FSV-25 are slowly updated according to the range set for this software.	
Seabed echoes are too strong to see.	Try the seabed function. For details, see section 2.7.	

APPENDIX 1 ERROR MESSAGES

When an error occurs, an error message appears in the dialog. Click [OK] to delete the dialog.

ID	Message	Meaning	Remedy
000403E8	F3D-S Already Run!!	The F3D-S software is already started up.	Restart the F3D-S software after five seconds.
00410111	Connection to sonar has been disconnected.	Communication between the F3D-S software and the FSV-25 is disconnected.	Confirm if the LAN cable is firmly connected and then click  on the lower InstantAccess bar™ to connect the PC to the FSV-25.
800407D1	Failed Read File.	The selected file can not be read.	Select another file.
800407D3	File Format Error.	The file format is not correct.	Select another file.
8004100D	Data acquisition failed.	The data can not be received within the specified time.	Restart the F3D-S software.

ECF

(Elemental Chlorine Free)

The paper used in this manual
is elemental chlorine free.

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