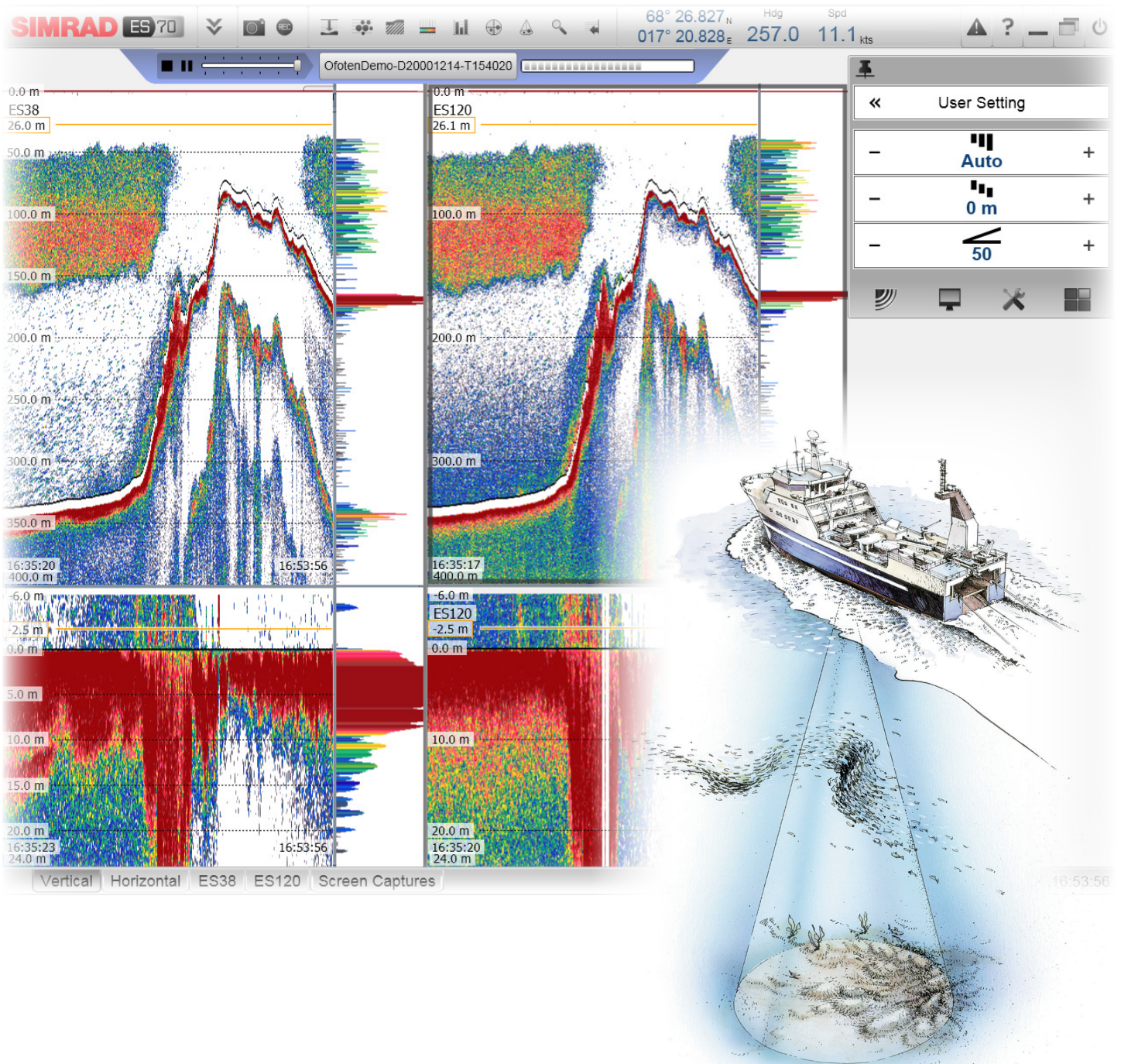


Quick start guide

Simrad ES70 Fish finding echo sounder





KONGSBERG

Simrad ES70

Quick start guide

Release 1.2.x

This manual provides you with the basic information required to install the Simrad ES70. For more detailed information about the practical use of the product, refer to the *Simrad ES70 Operator manual* or the *Simrad ES70 Reference manual*.

354205/C

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| Rev.B | N/A | Not released |
| Rev.C | 11.04.2012 | Revised for SW version 1.2.x. |

License information

| When you have obtained the necessary licenses to operate the ES70, we strongly advice that you write down the hardware ID and the license codes on this page. | | |
|---|---------|------|
| Function | Purpose | Code |
| Hardware ID: | N/A | |
| License code | | |
| License code | | |
| License code | | |

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Disclaimer

Kongsberg Maritime AS endeavours to ensure that all information in this document is correct and fairly stated, but does not accept liability for any errors or omissions.

Warning

The equipment to which this manual applies must only be used for the purpose for which it was designed. Improper use or maintenance may cause damage to the equipment and/or injury to personnel. All users must be familiar with the contents of the appropriate manuals before attempting to install, operate, maintain or in any other way work on the equipment.

Kongsberg Maritime AS disclaims any responsibility for damage or injury caused by improper installation, use or maintenance of the equipment.

Support information

If you require maintenance or repair, contact your local dealer. You can also contact us using the following address: simrad.support@simrad.com. If you need information about our other products, visit <http://www.simrad.com>. On this website you will also find a list of our dealers and distributors. See also *Support information* on page 11.

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About this manual

Purpose

The purpose of this quick start guide is to provide an introduction to safe and efficient use of the Simrad ES70.

A good understanding of system functions and controls is essential to fully take advantage of the functionality provided. Sea conditions vary, sometimes drastically, and it is not possible to identify settings that will provide the best data at all times. Careful study of the information in this manual is highly recommended, preferably while exploring the system's functionality.

If you need more detailed information about this product, refer to the *Simrad ES70 Operator manual* or the *Simrad ES70 Reference manual*.

Target audience

The manual is intended for all inexperienced and new users of the Simrad ES70.

We assume that you are familiar with the basic acoustic principles of sound in water, and that you have some experience with echo sounder operation.

Click “Help”!

Installed on your Simrad ES70 you will find a comprehensive on-line help system. You may not find it in your language, but everything you can read in the *Simrad ES70 Reference manual* can also be found in the context sensitive on-line help.

To access this information click [?] on the **Title Bar**, or the [?] button in one of the dialogs.

Note that when you open the help system it will place itself on the top of the display presentation!

Online information

All operation and installation end user documentation provided for your Simrad ES70 can be downloaded from <http://www.simrad.com>.

License information

The Simrad ES70 is a licensed product. In order to obtain a license, contact your local dealer.

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Simrad ES70

Study this chapter to familiarize yourself with the Simrad ES70.

Topics

- *Important* on page 8
- *System description* on page 9
- *System diagram* on page 11
- *Support information* on page 11

Important

As with all other advanced instruments, there are a few important things that you must be aware of.

Topics

- *When the ES70 is not used* on page 8
- *When you are docking your vessel* on page 8
- *If something breaks down* on page 8
- *When you switch off the ES70* on page 8
- *Transducer handling* on page 9

When the ES70 is not used

When you do not use the ES70, switch off the display and the computer.

If you know that you will not use the ES70 for a long time, we recommend that you also switch off the transceiver(s). Since each transceiver is not provided with a power switch, you must either disconnect the power cable, or disengage the relevant circuit breaker.

When you are docking your vessel

If the transducer is activated when out of water it may be damaged beyond repair. It is therefore very important that no one tries to use the ES70 when the vessel is in dry dock.

To ensure that this can not happen, disconnect the power supply cable to either the computer or the transceiver - or both! You may also remove the circuit breakers on the AC mains supply to the ES70 transceiver(s). Do this before the vessel is placed in the dry dock!

If something breaks down

If you believe that something has broken down, contact your local dealer. He will be able to assist.

A list of all our dealers is provided on <http://www.simrad.com>. If you are unable to contact a dealer, observe the support information in this chapter.

→ *Support information* on page 11

When you switch off the ES70

You must NEVER switch off the ES70 by means of the on/off switch on the computer.



You must ALWAYS exit the ES70 application by clicking the Exit button on the **Title Bar**.

If you power down the ES70 by means of the computer switch you may damage the software application and the interface parameters to external devices.

Transducer handling

Note

All transducers must be handled as delicate items. Any wrongful handling may damage the transducer beyond repair.

Do not activate the transducer when it is out of the water.

Do not lift the transducer by the cable.

Do not step on the transducer cable.

Do not handle the transducer roughly, avoid impacts.

Do not expose the transducer to direct sunlight or excessive heat.

Do not use high pressure water, sand blasting or metal tools to clean the transducer face.

Do not use strong solvents to clean the transducer face.

System description

The Simrad ES70 is a high accuracy professional single- and split-beam multi purpose fish finder. It is designed for the professional fishery community. The latest innovations in computer technology have been used to satisfy the increasing needs from our demanding customers: "Top performance at any depth, and easy to operate!"

The Simrad ES70 is a modular system, the basic configuration consists of a computer, a transceiver and a transducer. Using this basic configuration you can start with a simple single frequency single beam system. Later, you can expand the system to a multi-frequency echo sounder using single and/or split-beam transducers. You can choose from a wide variety of advanced software functions, transducers, and transceivers.

Multiple frequencies are available for the Simrad ES70. This is because different frequencies and transducers are used for different fisheries. Mackerel, Tuna, Anchovies, Herring and other schooled fish are best measured using a high frequency system, typically 120 or 200 kHz depending on the depth. Cod, Pollock, Seith and other bottom fish can be measured using 70 or 38 kHz systems, while 18 kHz is used for deep water species. Any two of the available frequencies can be assembled in the same transceiver cabinet. Each frequency is operated separately as with individual echo sounders, or simultaneously to see the frequency response from the fish on two different frequencies. You can add up to a total of six frequencies on the screen at the same time, or on separate monitors, using available software, computer technology and display monitors.

With the Simrad ES70, Simrad introduces a new way to present optional information. We call them *information panes*. With a click on the requested icon on the top bar, the information you wish to add to the echogram is presented in a dedicated frame. You can place the frame wherever you want, and you can change it to any size and shape. It is even transparent, so you will not lose any information from the echogram behind it.

The new zoom function provided by the Simrad ES70 is innovative, efficient and very easy to use. Using the trackball you can establish an area on the echogram. The information within this area is displayed in the Zoom pane, and the fish biomass is calculated and displayed. The zoomed area can be used to investigate a school of pelagic fish, or an area close to bottom.

System diagram

Two basic ES70 system diagrams are provided. Interface capabilities, power supplies and power cables are not shown.

Figure 1 System diagram with a single General Purpose Transceiver (GPT)

- A Display Unit
- B Processor Unit
- C General Purpose Transceiver (GPT)
- D Transducer

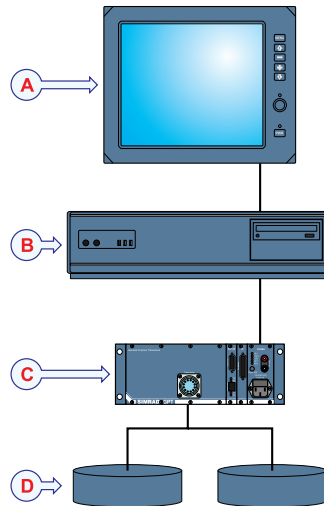
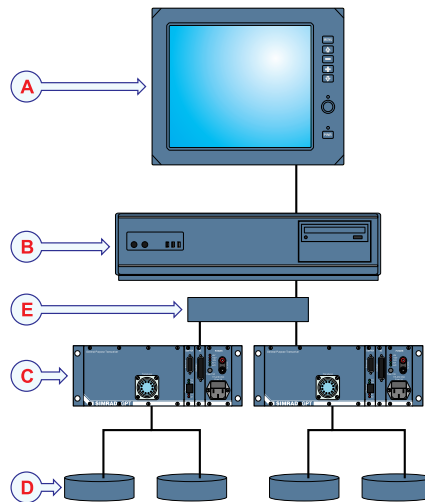


Figure 2 System diagram with two General Purpose Transceivers (GPT)

- A Colour monitor
- B Processor Unit
- C General Purpose Transceiver (GPT)
- D Transducer
- E Ethernet switch



(C0204216-002)

Support information

If you need technical support for your Simrad ES70 you must contact your local dealer, or one of our support departments. A list of all our dealers is provided on <http://www.simrad.com>.

Norway (Main office)

- **Company name:** Kongsberg Maritime AS / Simrad
- **Address:** Strandpromenaden 50, 3190 Horten, Norway
- **Telephone:** +47 33 03 40 00
- **Telefax:** +47 33 04 29 87
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- **Website:** <http://www.simrad.no>

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- **Company name:** Simrad Spain
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- **E-mail address:** simrad.asia@simrad.com
- **Website:** <http://www.simrad.com>

Getting started

This chapter describes how to get started with the basic operation of the Simrad ES70.

It contains an brief overview of the basic system operation and procedures. If you are a first time user, we recommend that you read through this chapter while operating the Simrad ES70 so that you can familiarize yourself with the menus, dialogs and display presentations.

Are you going to power up the Simrad ES70 for the first time?

If you are about to switch on your Simrad ES70 system for the very first time, see first chapter *Installation* on page 40. It provides hardware and software installation procedures, as well as dedicated procedures for initial start-up and configuration.

Have you installed at least one frequency channel?

This chapter assumes that the Simrad ES70 has at least one frequency channel (transceiver and transducer) readily connected. If this is not the case, observe the dedicated procedure in chapter *Installation; Installing frequency channels* on page 44.

Topics

- *Power on/off procedures* on page 14
- *Starting normal operation* on page 16
- *Operating principles* on page 26
- *Presentation overview* on page 28

Related topics

- *Installation* on page 40
- *Installing frequency channels* on page 44

Power on/off procedures

These procedures explain how to switch the ES70 system on and off.

Note

*When you power up the ES70 for the very first time, observe the procedures in chapter *Installation* on page 40.*

Make sure that you have sufficient water below the hull before you power up the ES70. If you start the ES70 with the transducer in air, you may damage it beyond repair!

Important

In this manual, the phrase “click” means that you shall place the cursor over the specified button, field or function, and press the left mouse (or trackball) button once. The phrase “double-click” means that you shall click the mouse button twice rapidly.

The phrase “press” means that you shall press a physical button with your finger, for example a character button or the **Enter** key on the keyboard.

Topics

- *Powering up the ES70* on page 14
- *Powering down the ES70* on page 16

Powering up the ES70

Purpose

This procedure explains how to power up the Simrad ES70.

This procedure assumes that you have connected one or more transceiver to the ES70. If this is not the case, observe the relevant start-up procedure in chapter *Installation*.

→ *Setting up the ES70 transceiver(s) for the first time* on page 43

Procedure

- 1 Verify that the transceiver(s) are switched on.
The General Purpose Transceiver (GPT) is not provided with an on/off switch.
Unless a dedicated solution has been provided during the installation to facilitate power on/off, the transceiver(s) are permanently powered up. However, if the ES70 has not been used for a longer period of time, the power to the transceiver(s) may have been disconnected.
- 2 Power up the colour display.
If required, refer to the instructions provided by the display manufacturer.
- 3 Power up the ES70 computer.
Wait for the operating system to start up.
- 4 Double-click the ES70 icon on the desktop to start the program.
- 5 Wait while the ES70 program starts on the computer.

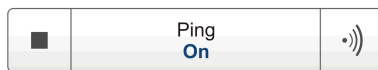
6 Choose user settings.

During the program load, a dialog appears to let you choose from the current user settings available on the ES70.

The dialog is only visible a few seconds. You do not need to make a choice here. You can select user setting at any time by means of the **User Settings** dialog on the **Main** menu.

7 Observe that the ES70 presentation fills the entire screen.**Important**

When the ES70 program has started, the icon for the **Operation** menu will flash to remind you that “pinging” is disabled. This is for safety reasons. You must manually start “pinging” by means of the **Ping** button.

**8** Choose operational mode.

This procedure explains how to set up the ES70 for normal operation and start ‘pinging’.

Procedure

- a** Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- b** Click the **Operation** icon.
This icon is located under the **Main** menu. It is used to open the **Operaiton** menu.
- c** Click the **Operation** button, and select *Normal*.
- d** On the **Ping** button, click the symbol on the right hand side to start pinging.

**9** On the **Ping** button, click the symbol on the right hand side to start pinging.**10** Observe that the ES70 starts.

The ES70 starts up using the same operational parameters as the last time you used it. If these parameters are acceptable, continue operation. If you wish to alter basic operational parameters, see the dedicated procedures.

When the ES70 starts, it is very important that it detects the bottom correctly. In most cases this will take place automatically. However, we have experienced that large schools of fish or difficult bottom conditions have deceived the ES70 to display the wrong depth. In these cases the sounder may display the bottom at 0,0 meters. In order to aid the ES70 to locate the correct depth, observe the dedicated procedure.

Related topics

- *Starting normal operation* on page 16
- *Checking the bottom detector settings* on page 19

- *Operation menu* on page 36

Powering down the ES70

Purpose

This procedure explains how to power off the Simrad ES70.

Note

You must never switch off the ES70 only by means of the on/off switch on the computer. This may damage the software or the interface parameters for external devices. You must ALWAYS use this procedure.

Procedure

- 1 Click the **Exit** button.

It is located on the **Title Bar** in the top right corner of the ES70 presentation.

- 2 Observe that the ES70 application closes down.

- 3 If the computer does not switch itself off automatically, use the functionality provided by the operating system to switch it off manually.

- 4 Switch off the colour display.

If required, refer to the instructions provided by the display manufacturer.

- 5 Switch off the transceiver(s).

The General Purpose Transceiver (GPT) is not provided with an on/off switch.

Unless a dedicated solution has been provided during the installation to facilitate power on/off, you can leave the transceiver(s) on. However, if you know that the ES70 is not to be used for a longer period of time, disconnect the power to the transceiver(s).



Starting normal operation

Once you have powered up the complete ES70 system, you are ready to start the actual operation.

When started up, the ES70 will automatically apply its previous setup parameters.

The procedures assume that the ES70 has at least one frequency channel (transceiver and transducer) readily connected. If this is not the case, observe the relevant installation procedure.

→ *Installing frequency channels* on page 44

These procedures are partly provided to get you acquainted with the basic functionality provided by the ES70, and partly to set up the system for normal use. If you already know the ES70, or the current parameters are acceptable, you do not need to carry out the procedures.

Topics

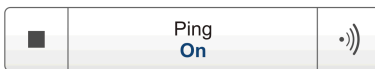
- *Setting operational mode “Normal” to start “pinging”* on page 17
- *Selecting menu language* on page 17
- *Checking the transceiver and transducer settings* on page 18
- *Checking the bottom detector settings* on page 19
- *Checking the colour scale settings* on page 20
- *Checking the size distribution and fish position settings* on page 21
- *Checking the echogram settings* on page 22
- *Checking the range settings* on page 24
- *Saving the current user settings* on page 25

Setting operational mode “Normal” to start “pinging”

This procedure explains how to set up the ES70 for normal operation and start ‘pinging’.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- 2 Click the **Operation** icon.
This icon is located under the **Main** menu. It is used to open the **Operaiton** menu.
- 3 Click the **Operation** button, and select *Normal*.
- 4 On the **Ping** button, click the symbol on the right hand side to start pinging.



Selecting menu language

The menu buttons – as well as other texts – in the ES70 presentation are available in several languages. This procedure explains how to select a different language.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- 2 Click the **Display** icon.
This icon is located under the **Main** menu. It is used to open the **Display** sub-menu.
→ *Display menu* on page 37
- 3 Click the middle of the **Language** button to open the list of available languages.
You can also click the [+] and [-] characters on the button to leaf through the list of available languages.
- 4 Click once on the language you wish to use.



- 5 Observe that the sub-menu is closed, and that all text in the menu buttons change to the selected language.

Important

To ensure that all texts are replaced with the chosen language, restart the ES70 application.

The context sensitive on-line help file may also be available in your language. To change the language in the on-line help, you must restart the ES70. If your language is *not* offered, the English on-line help will appear.

Checking the transceiver and transducer settings

This procedure explains how you can verify that the transceiver and transducer settings are correct.

Procedure

- 1 Observe that the currently connected transducer(s) are shown as tabs on the **Status bar**.

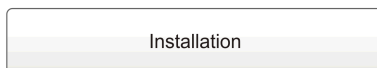
Each transducer name also identifies the operational frequency.

- 2 Click the **Setup** icon.

This icon is located under the **Main** menu. It is used to open the **Setup** menu.



- 3 Click the **Installation** button to open the **Installation** menu.



On the menu, click **Transceiver Installation** to open the **Transceiver Installation** dialog.



The purpose of the **Transceiver Installation** dialog is to set up the necessary parameters to connect the ES70 computer to the transceiver(s) and the transducer(s).

- 4 Check that all applicable transceivers and transducers are connected and operational. For each transceiver, this is indicated by the green label with text “Installed”.

If a problem exists, refer to the relevant procedure in the *Operational procedures* chapter. This chapter is located in the ES70 operator and reference manuals, as well as in the context sensitive on-line help.

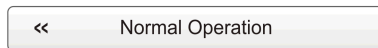
- 5 Click **OK** to save the current settings and close the dialog.

- 6 Click the **Operation** icon.

This icon is located under the **Main** menu. It is used to open the **Operaiton** menu.



- 7 Click **Normal Operation** to open the **Normal Operation** dialog.



The purpose of the **Normal Operation** dialog is to offer you an overview of the current transceiver parameters, and to provide you with the ability to change them.

- 8 For each frequency channel (transceiver/transducer combination):

- a Set **Mode** to *Active*.
- b Set **Pulse Length** to *Auto*.

The ES70 will automatically choose the best pulse duration to fit the operational frequency, mode and current depth. The pulse duration defines the resolution.

- c Set **Power** to maximum.
- d Check that the **Depth** value is set correctly.

This is the depth of the transducer face relative to the water surface. A positive value of for example 5 meters means that the transducer is located 5 meters below the sea surface. For accurate depth readings, this **Depth** value must be set up correctly.

- 9 Click **OK** to save the current settings and close the dialog.

Checking the bottom detector settings

This procedure explains how to set up the bottom detector parameters (minimum and maximum depth) using the **Bottom Detector** dialog. Use these parameters if the ES70 has problems detecting the bottom.

Procedure

- 1 Click the **Active** icon.

This icon is located under the **Main** menu. It is used to open the **Active** menu.



→ *Active menu* on page 39

- 2 On the **Active** menu, click **Bottom Detector** to open the **Bottom Detector** dialog.



The purpose of the **Bottom Detector** dialog is to define the upper and lower depth limits most likely to be used during the ES70 operation. In this dialog, you can also modify the setting for **Bottom Backstep** to change the bottom detection relative to the bottom echo.

- 3 Set **Minimum Depth** and **Maximum Depth** to values fit for the depth at your current location.

Note

If you set maximum depth to a value identical or smaller than the minimum value, the bottom detection algorithm will be disabled. The ES70 will then not be able to detect the bottom at all, and the displayed depth will be 0.00 m

- 4 Click **OK** to save the current settings and close the dialog.

Checking the colour scale settings

This procedure explains how you can change the colour scale currently used for the ES70 presentation.

Which colour scale to use is mainly a personal preference based on ambient light conditions, the nature of the echoes and experience. Keep in mind that in the basic scale with 12 colours, each discrete colour represents a 3 dB range of echo signal strength. This implies that the next colour is selected every time the echo strength is doubled.

If you choose to use 64 colours, the resolution of the ES70 presentation is greatly improved. It is then easier to distinguish the difference between the various echoes of different size and/or target strength.

Procedure

- 1 Click the **Colour Scale** icon.

This icon is located on the **Title Bar**. It is used to open the **Colour Scale** information pane.



- 2 Observe that the current colour scale is shown.

You can filter out the weakest echoes by manually modifying the colour threshold.

By default you have 64 or 12 colours available to present the echograms, and a selection of palettes. The colour scale can be retrieved any time by clicking the **Colour Scale** icon on the **Title Bar**.

The currently selected colour scale is also shown on the **Status Bar**.

Which colour scale to use is defined in the **Colour Setup** dialog on the **Display** menu.

Procedure

- a Click the **Colour Scale** icon.

This icon is located on the **Title Bar**. It is used to open the **Colour Scale** information pane.



- b Move the cursor to the left side of the colour scale.

Observe that the cursor changes shape to a dual arrow line.

- c Click on the left edge of the colour scale, keep the mouse button depressed, and drag the edge towards right.

- d Observe that the weakest colours are removed from the colour scale, and thus also the weakest echoes from the echogram presentation.
 - e Release the mouse button.
 - f In order to restore the weakest colours, click on the left edge of the current colour scale, and drag towards left.
- 3 Click the **Display** icon.
- This icon is located under the **Main** menu. It is used to open the **Display** sub-menu.
- *Display menu* on page 37
- 4 On the **Display** menu, click **Colour Setup** to open the **Colour Setup** dialog.
- << Colour Setup
- The purpose of the **Colour Setup** dialog is to control the presentation colours used by the ES70.
- 5 Click **OK** to save the current settings and close the dialog.



Checking the size distribution and fish position settings

This procedure explains how to verify the current parameters for size distribution and fish size settings.

Important

The **Size Distribution** information pane is only available if your ES70 is equipped with one or more split beam transceivers.

Procedure

- 1 Click the **Size Distribution** icon.
- The icon is located on the **Title Bar**. It is used to open the **Size Distribution** information pane.
-
- 2 In the **Size Distribution** information pane, click the **Setup** icon in the top right corner to open the **Size Distribution** dialog.
- The **Size Distribution** dialog allows you to shape the histogram in the **Size Distribution** information panel to your own requirements. You can set up the mode, the upper and lower limits, the accuracy, and the vertical resolution.
- 3 Click **OK** to save the current settings and close the dialog.
 - 4 Click the **Fish Position** icon.
- The icon is located on the **Title Bar**. It is used to open the **Fish Position** information pane.
-
- The **Fish Position** information pane shows the position within the beam of the detected single echoes for the current ping (largest circles) and the three previous ping (smaller circles). The view is “from above”. The colours indicate the echo strength.

5 Click the **Echo Position** icon.

The icon is located on the **Title Bar**. It is used to open the **Echo Position** information pane.



The **Echo Position** pane shows the position within the beam of the detected single echoes for the current ping (largest circles) and the three previous ping (smaller circles). The colours indicate the echo strength. This is basically the same view as the **Fish Position**, however the echoes are here viewed from the side and not from above.

Checking the echogram settings

This procedure explains how you can control the echogram views, select an echogram to make it “active”, and check and - if necessary - change the parameter settings for the echogram.

Procedure

1 Observe the ES70 echogram.

If you have two or more channels (transducers/frequencies), observe the tabs on the **Status bar**.

2 Click one of the transducer tabs. Observe that only the echogram from the selected frequency channel is shown.

By default, two echograms are shown for each frequency channel. The top echogram is surface related, while the bottom echogram is bottom related. Several echogram types are provided.

a Surface

The echogram is related to the sea surface. Start depth (upper echogram boundary) and vertical range (across echogram) are manually selected by the **Start Depth** and **Range** buttons on the **Main** menu.

The biomass is automatically calculated based on choices you make in the **Calculation Interval** dialog; within a given time frame, a defined number of pings, or a portion of the echogram view. The data is then taken from an echo area starting immediately after the transmit pulse, and ending just over the detected depth.

If you have limited your vertical range (using the **Range** and **Start Range** settings), the resulting area is used for the biomass calculation. If the seabed is clearly defined with a unique bottom detection, the bottom echo will not be included in the calculations. Therefore, if you switch the bottom detector off, the bottom echo will be included in the calculation.

b Bottom

The echogram is related to the detected bottom. Stop depth (lower echogram boundary) and vertical range are manually selected by the **Start Depth** and **Range** buttons on the **Main** menu. The echogram is only drawn for pings having a successful bottom detection.

The biomass calculation is made in the same way as for **Surface** echograms.

c Pelagic

This echogram is nearly identical to the **Surface** echogram. However, the biomass is calculated in a different manner.

The biomass calculations are not restricted by the bottom detection. This means that the bottom echo will be included in calculations if it appears within the chosen range.

Example 1 Biomass calculation

If you are investigating a large school of pelagic fish, set the **Start Range** and **Range** to enclose the school. If the school is large enough, a **Surface** echogram may mistake it for bottom, and the biomass readings will be wrong. The **Pelagic** echogram will however disregard the bottom detection, and give a correct estimate of the biomass.

d Trawl

This echogram covers the vertical opening of the trawl.

The echogram is only drawn when trawl position information is available.

The biomass calculation is made in the same way as for **Surface** echograms.

3 Move the cursor over the echogram.

Observe that a rectangular “tooltip” label is shown. It provides information about the echoes at the cursor's present position. Which information to include in the label is defined in the **Display Options** dialog.

4 Click the **Horizontal** tab. Observe that the echogram channels are shown horizontally.**5** Click the **Vertical** tab. Observe that the echogram channels are shown vertically.**6** Click on one of the echograms.

Observe that the echogram then appears with a thick border line. The echogram you have selected is now the “active” echogram. Any changes made in the **Echogram** dialog will by default only apply to this echogram.

7 On the **Active** menu, click **Echogram**.

Observe that the **Echogram** dialog opens.

The **Echogram** dialog allows you to set up the parameters controlling the echogram presentation. The three tabs control the horizontal lines, the echogram type with applied TVG, and how fast the echogram moves across the display.

- 8 In the **Echogram** dialog, check that the **Lines** tab is shown.

The **Lines** tab in the **Echogram** dialog allows you to control the horizontal and vertical lines used to enhance the echogram presentation. It allows you to change the appearance of the bottom line. You can add an extra bottom line, and in addition to this you can enable either a white line or a hardness indicator line. The tab also offers several horizontal information lines, and you can choose the vertical scale of the echogram. Finally, the **Lines** tab offers time or distance markers, and you can enable annotations.

- 9 Click **Bottom line** and **White line** to enable these. Observe the changes on the echogram.
- 10 Click the **Echogram** tab.

The **Echogram** tab in the **Echogram** dialog allows you to select which TVG curve to use for the echogram. You can choose from several standard curves, or make your own. The tab also allows you to choose which type of echogram you wish to display.

- 11 Change the **Echogram Type** to see the variations.
- 12 Click the **Horizontal Axis** tab.

The **Horizontal Axis** tab in the **Echogram** dialog allows you to choose the horizontal scale of the echogram. This controls how “fast” the echogram moves from right towards left across the display.

- 13 Try the various options to see the variations on the echogram.
- 14 Click **OK** to save the current settings and close the dialog.

Checking the range settings

This procedure describes how to check and adjust the vertical range settings.

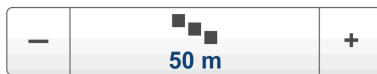
Procedure

- 1 Observe the vertical range of the echograms.
Note that the vertical range is set up differently depending on the echogram type.
- 2 Click in a surface related echogram to make it “active”.
- 3 Observe the **Range** button on the **Main** menu.



The **Range** function allows you to specify the vertical range of the water column covered by the echogram. The range is defined from a selected start range, and down to a value beneath the current bottom depth. The value shown and selected is by default applied only to the currently selected echogram.

- 4 Observe the **Start Range** button on the **Main** menu.



The **Start Range** function allows you to specify the start depth of the echogram, that is from which depth in the water column the presentation shall start. The value shown and selected is applied to the currently selected echogram type.

In a surface related echogram, you can click **Automatic Start Depth** to allow the ES70 to select the start range automatically.

Example 2 Start Range in a surface related echogram

In a surface echogram, set the **Start Range** value to 0 meters. This will make the echogram start from the sea surface (provided that the transducer offset has been defined). Set **Range** to the current depth plus 20 meters. The echogram will now show the area from the sea surface and down to 20 meters “below” the bottom. The bottom contour is easily detected when the depth changes.

Example 3 Start Range in a surface echogram

In a surface echogram, set the **Start Range** value to 10 meters. This will make the echogram start from 10 meters below the sea surface (provided that the transducer offset has been defined). Set **Range** to the current depth plus 20 meters. The echogram will now show the area from 10 meters below the sea surface, and down to 10 meters “below” the bottom. The bottom contour is easily detected when the depth changes.

- 5 Set **Range** to *Auto*.
 Set **Start Range** to 0.
 Observe the changes made to the surface related echogram.
- 6 Click in a bottom related echogram to make it “active”.
- 7 Observe the **Range** and **Start Range** buttons on the **Main** menu.

Example 4 Start Range and Range in bottom related echogram

In a bottom echogram, set the **Start Range** value to -5 meters. This will make the echogram start from 5 meters above the bottom. Set **Range** to the 5 meters plus 10 = 15 meters. The echogram will now show the area from 5 meters above the depth, and down to 10 meters “below” the bottom. The bottom contour will appear as a flat line.

- 8 Set **Range** to 15.
 Set **Start Range** to 5.
 Observe the changes made to the bottom related echogram.

Saving the current user settings

This procedure explains how to save the current configuration and parameter settings.

If you have several users with favourite configurations, if you work with different gears, or with different hardware configurations, depth or bottom conditions, we recommend that you save the ES70 operational parameters for future use.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- 2 On the **Main** menu, click **User Settings** to open the **User Settings** dialog.



The **User Settings** dialog allows you to save the current user settings (parameter selections), and to retrieve previously saved factory or user settings.

- 3 In the **User Setting** dialog, click the **Save Current Setting** button.
- 4 In the **Setting** dialog, click **OK** to accept the suggested name.
- 5 You can also choose a different name.

If you have a keyboard connected to the ES70 computer, you can click in the text field, remove the suggestion, and enter any name.

Tip

If you do not have a computer keyboard connected to your ES70 system, click the **Keyboard** button to open an on-screen keyboard.

Click **OK** to save the settings with the chosen name.

- 6 Observe that the name you have chosen appears on the **Saved Settings** list.
- 7 Click **OK** to save the current settings and close the dialog.

Operating principles

Like most computerized applications, the ES70 is operated using a mouse (or trackball) and an optional keyboard.

Important

In this manual, the phrase “click” means that you shall place the cursor over the specified button, field or function, and press the left mouse (or trackball) button once. The phrase “double-click” means that you shall click the mouse button twice rapidly.

The phrase “press” means that you shall press a physical button with your finger, for example a character button or the **Enter** key on the keyboard.

Topics

- *Cursor* on page 27
- *Mouse* on page 27

- *Trackball* on page 27

Cursor

The mouse (or trackball) controls the cursor movement on the ES70 presentation. By moving the cursor over the various information provided on the display, and clicking the left mouse button, you are able to control all operation.

Tip

If you are left-handed, the Windows operating system allows you to redefine the mouse buttons. You can then choose to click with the right button.

The shape and purpose of the cursor change depending on its location.

- Move the cursor over the **Title Bar** at the top of the presentation and **Status Bar** at the bottom, and left-click the icons and buttons to access the functionality provided.
- Move the cursor over the echogram, and observe the tooltip that provides detailed information about the echo information at the depth indicated by the cursor location.
- Move the cursor over the menu and menu buttons, and click to alter the operational parameters and open dialogs. Observe that the shape of the cursor changes over the menu buttons to indicate which choices you have to control these parameters.

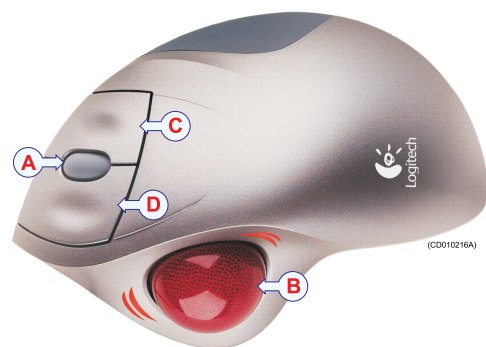
Mouse

The computer mouse can be used to control the functionality provided by the ES70. The mouse controls the movements of the cursor, and the buttons are used to click on buttons and select parameters.

Trackball

All ES70 functions can be controlled with the trackball. The ball controls the movements of the cursor, and the buttons are used to click on buttons and select parameters.

- A** *Control wheel (not used)*
- B** *Trackball, use this to control the cursor's location on the screen*
- C** *Right mouse button (not used)*
- D** *Left mouse button*



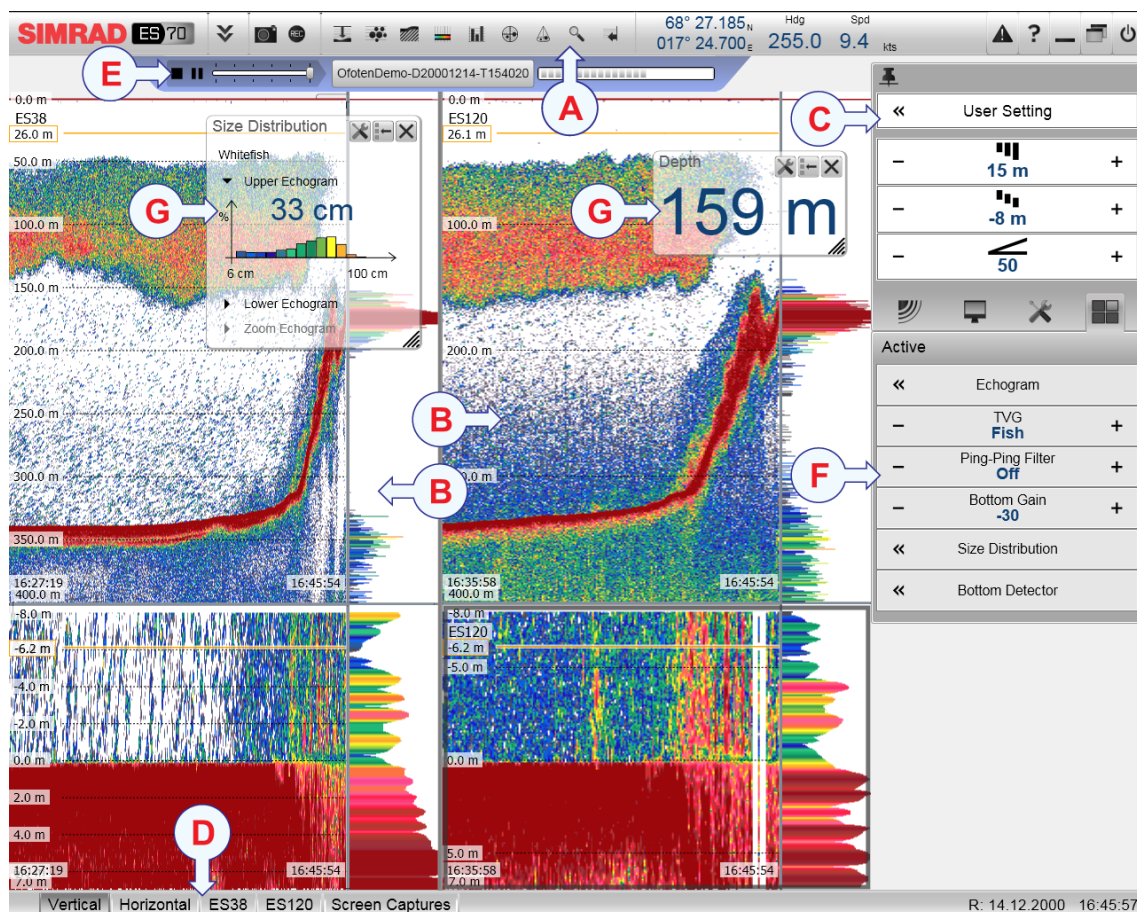
Presentation overview

The display presentation offered by the Simrad ES70 system provides a number of echograms. It also provide a Title Bar, a Status Bar and a menu system to facilitate operation using a computer mouse or a trackball.

Topics

- *Echo sounder presentations* on page 28
- *Title Bar* on page 30
- *Status Bar* on page 30
- *The menu system* on page 31
- *The menu buttons* on page 32

Echo sounder presentations



A typical ES70 display presentation is shown.

A Title Bar

The **Title Bar** identifies the manufacturer's and product logo, and provides several icons and buttons. These are used to hide or retrieve the menu system and the information panes, provide navigational information, and to enable basic system functions.

→ *Title Bar* on page 30

B Echogram(s)

The **Echogram(s)** take up the largest part of the ES70 display presentation.

By default, you will have two echograms for each frequency channel (transceiver/transducer combination); surface related and bottom related. If you have more than one frequency channels, the echograms for each frequency can be presented horizontally with one over the other, or next to each other. This is controlled by tabs on the **Status bar** (D).

If you click in an echogram, the echogram is selected to be "active". The "active" echogram is identified with a thick border. If you change parameters related to the echograms, these are by default only applied to the "active" echogram.

Tip

You can modify the size of the echograms by moving the boundary lines between the echograms. Click on a boundary line, hold the button depressed, and move the line horizontally or vertically.

C Menu system

The menu system is by default located on the right hand side of the presentation. To open any of the sub-menus, click the icons under the **Main Menu**. To hide or retrieve the **Main** menu, click the **Menu** button on the **Title Bar**.



→ *The menu system* on page 31

D Status Bar

The **Status Bar** is located at the bottom of the ES70 presentation.

→ *Status Bar* on page 30

E Replay Bar**F Sub-menus**

The sub-menus may be opened from the icons at the bottom of the **Main** menu.



→ *The menu system* on page 31

G Information panes

You can choose from several **Information panes** to provide you with additional data. These panes are selected from the buttons on the **Title Bar**. The panes can be moved around on the echogram presentation, and you can change their sizes. The panes are transparent, so echogram information displayed behind them are not lost.

Title Bar

The ES70 **Title Bar** is located on the top of the display presentation, and it is stretched from the far left to the far right side.

The purpose of the **Title Bar** is to give you fast access to key functionality and navigational information.



A Logo and product name.

This element identifies the manufacturer and the product.

B Menu

Click this button to hide or recall the menu system.

C Screen capture, Record and Event

These buttons are provided for easy access to recording and annotation functions.

D Information panes

Click any of these buttons to open and close an information pane.

E Navigation field

These are not buttons, but information icons providing current data related to the vessel movements.

F Depth Alarms

This field shows you the currently chosen depth alarms.

When the alarm is triggered, the **Depth Alarms** field changes colour to red. The warning is also provided as a message in the messaging system and - if enabled - as an audio signal.



To acknowledge the alarm, click the **Depth Alarms** field to open the dialog. The alarm sound is then automatically disabled. To “restart” the alarm, click to enable **Use Alarm Sound**.

G Function buttons

These buttons are used to control basic system functions.

Status Bar

The **Status Bar** is located at the bottom of the ES70 presentation.

The purpose of the **Status Bar** is to give you fast access to key functionality, as well as time and date information.



A Presentation format

Place your echograms next to each other or over each other.

B Transducer selection

Choose which transducer to see.

C Screen Captures

Click to open the **Screen Captures** browser.

D Colour scale

This colour bar on the **Status Bar** presents the currently selected colour scale.

E Date

This field on the **Status Bar** presents the current date.

F Time

This field on the **Status Bar** presents the current time.

The menu system

The menu system on the ES70 is by default placed on the right hand side of the display presentation. You can however easily move the menu to the left side using the **Display Options** dialog, or hide it from view with the **Menu** button on the **Title Bar**.

The main menu is short, and the sub-menus are opened by clicking on the icons under the **Main** menu.

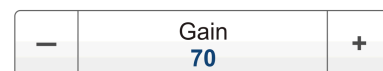
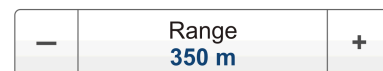
The selection of operational parameters on the ES70 is done using a tree structure with a main menu, a set of secondary menus, and several menu buttons. Some of the menu buttons open dialogs or miniature menus to provide additional parameters.

The **Main** menu provides the parameters most frequently used during normal operation.

Below the main menu, dedicated icons are used to open the other menus. These are (from left):



- a** The **Operation** menu controls the main operational parameters.
- b** The **Display** menu controls the visual aspects of the system, such as parameters related to the display presentation.
- c** The **Setup** menu allows you to control the configuration of the signal processing, as well as system installation and maintenance, and the interfaces to peripheral devices.
- d** The **Active** menu has its content linked to the current active item (view or object). Use it to access special features available for the selected view or object.



The menu buttons

Each menu contains several menu buttons. Each button shows the function of the button, some of them also display the current parameter setting. The majority of the buttons in each menu provide one or more of these functions.

- You can increase and decrease parameter values by clicking the [+] and [-] fields on the button.
- You can change parameter values by clicking on the button, holding the mouse depressed, and then moving the cursor sideways.
- You can change parameter values by means of the scroll wheel on the mouse or trackball.
- You can enter parameter values from the keyboard (if you have one).
- You can select parameter value from the button's sub-menu.
- You can open a dedicated dialog.

How to select a numerical parameter using the +/- buttons

- 1 Move the cursor to either side of the button, and observe that the background colour changes.



- a Click on the left side of the button to decrease the numerical value.
- b Click on the right side of the button to increase the numerical value.

How to select a numerical parameter by moving the cursor horizontally

- 1 Place the cursor on the middle of the button.



- 2 Click and hold the left mouse button depressed.
- 3 Move the cursor horizontally: left to decrease the parameter value, or right to increase it.
- 4 Release the mouse button when the requested value is shown.

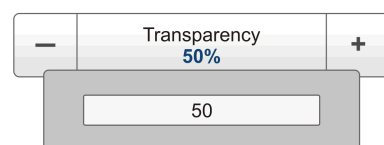
How to select a numerical parameter by means of the scroll wheel

- 1 Place the cursor on the middle of the button.
- 2 Spin the scroll wheel in either direction to increase or decrease the parameter value.
- 3 Release the scroll wheel when the requested value is shown.



How to select a numerical parameter using the keyboard

- 1 Click the middle section of the button to open a text field.



- 2 Enter the numerical value into the text field.

If the numerical value exceeds the permitted range for the parameter, the frame in the text field will be red. You will then not be able to enter the value.

- 3 Press the **Enter** key.

How to select a parameter using a sub-menu

- 1 Click the middle section of the button to open a sub-menu, then click the requested parameter value.

The chosen value is applied, and the sub-menu is automatically closed.

- 2 Whenever applicable, you can also access the sub-menu by clicking the left and right side of the button. This method will not show you the parameter choices.
 - a Click on the left side of the button to select a 'lower' sub-menu choice.
 - b Click on the right side of the button to select a 'higher' sub-menu choice.



How to select parameters using a dialog



- 1 Click anywhere on the button to open a separate dialog.

The menu system

The menu navigation employed by the ES70 is similar to the other Simrad applications which follow the new user interface standards developed by Simrad.

The main menu is by default located at the right side of the screen. By means of dedicated icons at the bottom of the main menu, you can open and close the relevant sub-menus. Menu choices shown in dark colours are not available for the current operation or operational mode.

Topics

- *Main menu* on page 34
- *Operation menu* on page 36
- *Display menu* on page 37
- *Setup menu* on page 38
- *Active menu* on page 39

Main menu

The following functions and parameters are available from the **Main** menu.

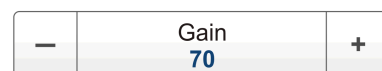
1 User Settings

The **User Settings** dialog allows you to save the current user settings (parameter selections), and to retrieve previously saved factory or user settings.



2 Range

The **Range** function allows you to specify the vertical range of the water column covered by the echogram. The range is defined from a selected start range, and down to a value beneath the current bottom depth. The value shown and selected is by default applied only to the currently selected echogram.



3 Start Range

The **Start Range** function allows you to specify the start depth of the echogram, that is from which depth in the water column the presentation shall start. The value shown and selected is applied to the currently selected echogram type.

In a surface related echogram, you can click **Automatic Start Depth** to allow the ES70 to select the start range automatically.

4 Gain

The purpose of the **Gain** function is to adjust the echo level in the echogram presentations.

Secondary menus

The bottom of the **Main** menu holds the icons for the secondary menus. Click on one of these icons to open the requested menu.



Menu button

On the **Title bar**, click once on the **Menu** button to hide the menu.

Click one more time to bring the menu back again.



When the menu is hidden, it will temporarily be shown on the left and right hand side of the display if you move the cursor to that position.

Tip

For detailed information about every function, button and dialog, refer to the *ES70 Reference manual* or to the context sensitive on-line help.

Operation menu

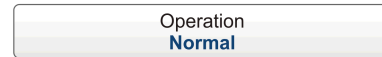
The following functions and parameters are available from the **Operation** menu.



Click once on the icon under the **Main** menu to open the **Operation** menu. Click one more time on the icon to close the menu.

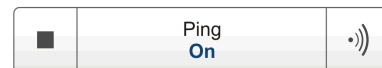
1 Operation

The purpose of the **Operation** function is to control the operational mode of the ES70. You can set it to *Normal*, *Replay* or *Inactive*.



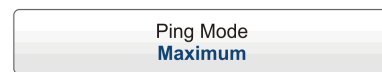
2 Ping

The purpose of the **Ping** function is to enable or disable the ES70 audio transmissions into the water (“pinging”).



3 Ping Mode

The **Ping Mode** function is used to control how often the ES70 shall transmit its energy into the water. For normal use, choose *Maximum*. This will allow the ES70 to transmit continuously and as often as possible.



4 Ping Interval

Use the **Ping Interval** function to choose the time (in milliseconds) between each transmission (ping) when **Ping Mode** is set to *Interval*.



5 Normal Operation

The purpose of the **Normal Operation** dialog is to offer you an overview of the current transceiver parameters, and to provide you with the ability to change them.



6 Record

The **Record** function allows you to record the unprocessed transducer signals, and save them on the internal hard disk. The files can later be copied or moved to other recordable media.



Tip

For detailed information about every function, button and dialog, refer to the *ES70 Reference manual* or to the context sensitive on-line help.

Display menu

The following functions and parameters are available from the **Display** menu.

Click once on the icon under the **Main** menu to open the **Display** menu. Click one more time on the icon to close the menu.



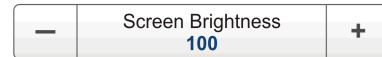
1 Colour Setup

The purpose of the **Colour Setup** dialog is to control the presentation colours used by the ES70.



2 Screen Brightness

The purpose of the **Screen Brightness** function is to adjust the intensity of the light given off by the display.



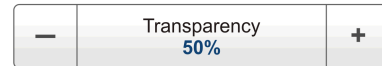
3 Units

The purpose of the **Units** dialog is to control the unit of measurements used by the ES70.



4 Transparency

The purpose of the **Transparency** function is to adjust how much you are able to see through the information panes.



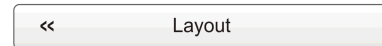
5 Language

The purpose of the **Language** function is to select the language to be used on the menus.



6 Layout

The purpose of the **Layout** dialog is to define which transceiver channels you wish to present on the display presentation. You can also position the echograms in relation to each other.



7 Display Options

The purpose of the **Display Options** dialog is to control the location of the menu, and which information to be provided on the **Title Bar** and the **Status bar**.



It also controls which tooltips to display.



8 About

The **About** dialog allows you to see the current ES70 software version.

Tip

For detailed information about every function, button and dialog, refer to the *ES70 Reference manual* or to the context sensitive on-line help.

Setup menu

The following functions and parameters are available from the **Setup** menu.

Click once on the icon under the **Main** menu to open the **Setup** menu. Click one more time on the icon to close the menu.



1 Synchronization

The purpose of the **Synchronization** dialog is to set up the ES70 to operate alone, or as a master or slave in a synchronized system. Synchronization is required in order to avoid interference if the ES70 is used simultaneously with other hydroacoustic instruments within the same frequency range.

<< Synchronization

2 Annotations

The purpose of the **Annotations** dialog is to allow you to enter comments and annotations into the echograms.

<< Annotations

3 Fish Select

The parameters in the **Fish Select** dialog allows you to select the fish species, and to modify the fish size distribution manually.

<< Fish Select

4 Calculation Interval

The **Calculation Interval** dialog allows you to define the time, number of pings, or part of the echogram view used to calculate the biomass and the size distribution.

<< Calculation Interval

5 Navigation

The **Navigation** dialog controls how the ES70 receives information from external peripherals, such as navigation and gyro compass systems.

<< Navigation

6 Trawl

The **Trawl** dialog allows you to enter the main parameters related to the trawl. Trawl information is used for display of upper and lower trawl line in the echogram. All received speed data are stored to file when recording of raw data to file is enabled.

<< Trawl

7 Ethernet Output

The purpose of the **Ethernet Output** dialog is to define the communication parameters for the EK500 datagram output on the Ethernet port.

<< Ethernet Output

8 Depth Output

The **Depth Output** dialog is used to set up the output of depth data from the ES70 to a dedicated communication port on a specified format.

<< Depth Output

9 Installation

The **Installation** function opens a small sub-menu with access to the functions and dialogs required to set up the ES70 for operational use.

Installation

Tip

For detailed information about every function, button and dialog, refer to the *ES70 Reference manual* or to the context sensitive on-line help.

Active menu

The following functions and parameters are available from the **Active** menu.

Click once on the icon under the **Main** menu to open the **Active** menu. Click one more time on the icon to close the menu.



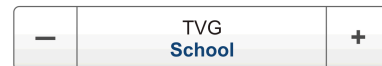
1 Echogram

The **Echogram** dialog allows you to set up the parameters controlling the echogram presentation. The three tabs control the horizontal lines, the echogram type with applied TVG, and how fast the echogram moves across the display.



2 TVG

The purpose of the **TVG** button is to allow you modify the reception parameters by changing the Time Varied Gain (TVG) curve for the received echoes.



3 Ping-Ping Filter

The **Ping-Ping Filter** removes unwanted noise and echoes from the echogram presentation.



4 Bottom Gain

The **Bottom Gain** setting controls the gain below the detected bottom depth.



5 Size Distribution

The **Size Distribution** dialog allows you to set up the parameters for the histogram presented in the Size Distribution information pane.



6 Bottom Detector

The purpose of the **Bottom Detector** dialog is to define the upper and lower depth limits most likely to be used during the ES70 operation. In this dialog, you can also modify the setting for **Bottom Backstep** to change the bottom detection relative to the bottom echo.



Tip

For detailed information about every function, button and dialog, refer to the *ES70 Reference manual* or to the context sensitive on-line help.

Installation

These are the specific procedures required to get you started with the Simrad ES70. Normally, you will only need to do these procedures once.

We recommend that you allow your dealer – with the assistance from a shipyard – to do the physical installation, install the software, obtain a valid license, and get you started.

Topics

- *Installation of the system units* on page 40
- *Installation of the ES70 software* on page 41
- *Obtaining the software license* on page 42
- *Setting up the ES70 transceiver(s) for the first time* on page 43
 - *Main procedure* on page 43
 - *Installing frequency channels* on page 44
 - *Starting normal operation* on page 45

Installation of the system units

This procedure explains the basic principles of ES70 installation. It does not provide any details related to physical installation of the various units, location and installation of the transducer(s), and the various interface parameters.

All documentation for the Simrad ES70 is located on the media device provided with the delivery. The documents can also be downloaded from <http://www.simrad.com>.

Note

In order to install the Simrad ES70 you must obtain and read the Simrad ES70 Installation manual.

Procedure

- 1 Install the various hardware units (transceiver(s), computer(s) and transducer(s) as described in the *Simrad ES70 Installation manual*.
- 2 Connect all necessary cables between the hardware units.
 - a Connect the transducer(s) to the transceiver(s).

- b** Connect power to the transceiver(s).
- c** Connect the Ethernet cable between the transceiver and the computer. Use an Ethernet switch if you have more than one transceiver.
- d** Connect the necessary cables to the display; power and video.

These tasks are described in detail in the *Simrad ES70 Installation manual*.

- 3** Do a close visual inspection of the installation. Check each cable and connection to ensure that all wiring is correct.
- 4** Power up the ES70, and proceed with the next procedure; software installation.

Related topics

- *Installation of the ES70 software* on page 41

Installation of the ES70 software

Use this procedure when you wish to install the ES70 software on a computer.

Note

Note that minimum hardware and software requirements must be met by the computer.

Procedure

- 1** Power up the computer.
- 2** Insert the ES70 software media.
If the ES70 software is provided on a CD or DVD, and your computer is not fitted with a suitable drive, copy the files from the CD/DVD to a USB memory stick.
- 3** Use a file manager application on the computer to access the software.
- 4** Double-click on the **Setup.exe** file to start the installation.
- 5** Allow the installation program to run. Follow the instructions provided.

Note

In the last dialog you are permitted to remove old settings. If you click to do this, the installation wizard will delete all settings related to the physical installation. These include all interface parameters, and all transceiver settings. Only software licenses are kept.

- 6** Once the installation has been completed, double-click the program icon on the desktop to start the application.
- 7** If you use **Windows 7** operating system:
 - a** Observe that **Windows 7 Firewall** will open a dialog requesting information about the network.
Select *Public*, and click **Allow access**.
 - b** The operating system may also open other dialogs to verify that the ES70 software can run on the computer. You must permit this.

8 Observe the relevant start-up procedure.

Related topics

- *Setting up the ES70 transceiver(s) for the first time* on page 43
- *Powering up the ES70* on page 14

Obtaining the software license

The ES70 requires a valid license to operate. This procedure explains how to obtain a license, and how to install it on your ES70 computer.

Without a license you will not be able to communicate with the ES70 Transceiver Unit(s).

Note

If you replace your computer, or if you replace major components inside your computer, you will need a new license code.

We strongly advice you to record the license code for safe keeping. You may for example write it down in the beginning of this manual.

- 1 Double-click the ES70 icon on the desktop to start the application.
- 2 Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- 3 Click the **Setup** icon.

This icon is located under the **Main** menu. It is used to open the **Setup** menu.



- 4 Click **Installation** to open the **Installation** sub-menu.



On the sub-menu, click **Software License** to open the **Software License** dialog.



The purpose of the **Software License** dialog is to allow you to enter a license code (text string) to unlock the ES70 functionality. In order to obtain the license code(s) required, contact your dealer.

- 5 Write down the **Hardware ID** provided by the **Software License** dialog.
- 6 Contact your dealer to order the software license.

Your dealer will need the following information from you to place the order:

- Vessel name and call sign
- Vessel type (trawler, purse seiner, etc.)
- Vessel owner's name, address and contact information
- Serial number on all transceivers
- Hardware ID

- 7 When the software license is returned to you, start the ES70, open the **Software License** dialog, and click **Enter Licence String**.
- 8 Write down the code, and click **Ok**.
- 9 Click **OK** to save the current settings and close the dialog.

Setting up the ES70 transceiver(s) for the first time

These procedures explain how to set up your computer to communicate with the transceiver. You only need to do this once.

Topics

- *Main procedure* on page 43
- *Installing frequency channels* on page 44
- *Starting normal operation* on page 45

Main procedure

This procedure explains how to set up you computer to communicate with the transceiver. You only need to do this once.

Note that this procedure covers both the Windows® XP® and Windows® 7 operating systems.

Important

Your computer may be provided with two Ethernet boards to interface with a local area network (LAN). You must then use one Ethernet board to communicate with the ES70 transceiver(s), and one to communicate with the LAN. These two boards can and must be set up separately. The Ethernet board used to communicate with the transceivers(s) must be set up with manual IP addresses. The board used to communicate with the LAN must be set up to obtain an IP address automatically (unless otherwise decided by your network administrator.)

Procedure

- 1 On the computer, define the network adapter settings.

Windows® XP®

- a Click **Start** → **Settings** → **Network Connections**.
- b Click on the network adapter once to select it.
- c Right-click, and click **Properties** on the short-cut menu.
- d On the list of connections, click **Internet Protocol (TCP/IP)**, and then **Properties**.

- e Click **Use the following IP address**, and enter the IP address and network mask.
IP Address: 157.237.14.12
Subnet mask: 255.255.0.0
- f Click **OK** to save the settings.
- g Exit all dialogs.

Windows® 7

- a Click **Start** → **Control Panel** → **Network Connections**.
 - b Click **Change adapter settings** on the left menu.
 - c Click once on the network adapter to select it, and click **Properties** on the short-cut menu.
 - d On the list of connections, click **Internet Protocol 4 (TCP/IPv4)**, and then **Properties**.
 - e Click **Use the following IP address**, and enter the IP address and network mask.
IP Address: 157.237.14.12
Subnet mask: 255.255.0.0
 - f Click **OK** to save the settings.
 - g Exit all dialogs.
- 2 On the computer, start the ES70 program.
 - 3 Set up the transceiver(s) and transducer(s).
 - 4 Start normal operation.

Related topics

- *Installing frequency channels* on page 44
- *Starting normal operation* on page 45

Installing frequency channels

This procedure explains how to install a frequency channel.

Important

You must have a valid software license on your ES70 computer to set up a frequency channel!

Each transceiver contains one or more frequency channels.

This phrase is used to identify the combination of a transceiver, transducers and the frequencies offered. Split beam transceivers contain only one channel each.

The upper part of the **Transceiver Installation** dialog displays a list of frequency channels which either are, or have been, installed on the ES70. For each channel on the list, a **Status** label is provided.

The following status values are available in the **Transceiver Installation** dialog.

- **Busy:** The frequency channel is already in use, probably by another echo sounder on the same network. You can not connect to this channel.
- **Installed:** This frequency channel is connected to your ES70 system.
- **Lost:** This frequency channel can not be used.
- **Available:** This frequency channel is vacant and ready for use.

Procedure

- 1 Click the **Setup** icon.

This icon is located under the **Main** menu. It is used to open the **Setup** menu.



- 2 Click the **Installation** button to open the **Installation** menu.



On the menu, click **Transceiver Installation** to open the **Transceiver Installation** dialog.



The purpose of the **Transceiver Installation** dialog is to set up the necessary parameters to connect the ES70 computer to the transceiver(s) and the transducer(s).

- 3 In the **Transceiver Installation** dialog, click **Browse**.

The ES70 will automatically search the network for transceivers.

- 4 Observe that all the frequency channels are listed in the dialog.
- 5 Select a frequency channel that is available, and choose the correct transducer in the spin box.

Note

This is a critical task. You must ensure that the correct transducer is selected. If you connect the transceiver to a transducer that can not handle the power rating, it may be damaged beyond repair.

- 6 Observe that the status for the relevant frequency channels changes to *Installed*.
- 7 Click **OK** to save the current settings and close the dialog.

Starting normal operation

This procedure explains how to set up the ES70 for normal operation.

- 1 Observe the **Main** menu. It is normally located on the right hand side of the ES70 presentation.
- 2 Click the **Operation** icon.

This icon is located under the **Main** menu. It is used to open the **Operaiton** menu.



- 3 Click the **Operation** button, and select *Normal*.

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