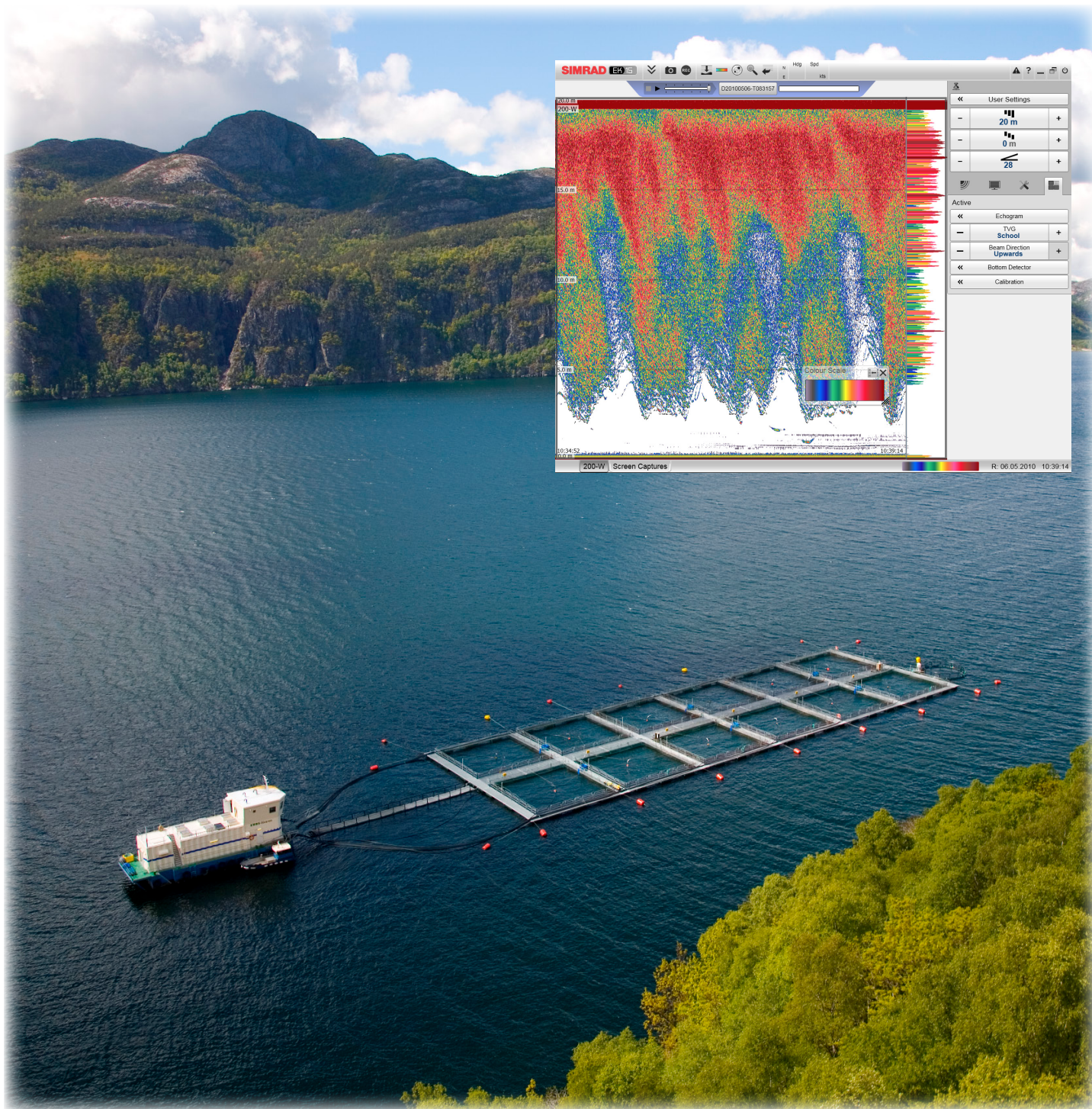


Quick start guide

Simrad EK15

Multi purpose scientific echo sounder





KONGSBERG

Simrad EK15

Quick start guide

Release 1.2.4

This manual provides you with an introduction to the Simrad EK15 Multi purpose scientific echo sounder. For more detailed information about the operation, refer to the *Simrad EK15 Operator manual* or the *Simrad EK15 Reference manual*.

All user documentation is included on the software media provided with the Simrad EK15. The manuals can also be downloaded from <http://www.simrad.com/ek15>.

The Simrad EK15 transducer (200–28CM) is not designed for hull mounting!

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Rev.C	2014-05-16	Changed to describe SW version 1.2.4. Dialog box for licensing removed. New output functionality to share NMEA data with other software running on the same computer.

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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.

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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 EK15.

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 EK15 Operator manual* or the *Simrad EK15 Reference manual*.

Target audience

The manual is intended for all inexperienced and new users of the Simrad EK15.

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 EK15 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 EK15 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 dialog boxes.

Online information

All operation and installation end user documentation provided for your Simrad EK15 can be downloaded from <http://www.simrad.com/ek15>.

License information

The Simrad EK15 is a licensed product. In order to obtain a license, contact your local dealer.

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Simrad EK15

Study this chapter to familiarize yourself with the Simrad EK15.

Topics

- *Important* on page 8
- *System description* on page 9
- *Support information* on page 10

Important

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

When the EK15 is not used

When you do not use the EK15, switch off the display and the computer.

If you know that you will not use the EK15 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.

Related topics

- *Powering down the EK15* on page 14

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 EK15 when the vessel is in dry dock.

To ensure that this can not happen, disconnect the power supply cable to the either the computer or the transceiver - or both! You may also remove the circuit breakers on the AC mains supply to the EK15 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.

Related topics

- *Support information* on page 10

When you switch off the EK15

You must NEVER switch off the EK15 by means of the on/off switch on the computer.

You must ALWAYS exit the EK15 application by clicking the **Exit** icon on the **Title Bar**.



If you power down the EK15 by means of the computer switch you may damage the software application and the interface parameters to external devices.

Important _____

Observe the procedure!

Related topics

- *Powering down the EK15* on page 14

Transducer handling

The Simrad EK15 transducer (200–28CM) is not designed for hull mounting!

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 EK15 is designed for a variety of applications, and for both mobile surveys and fixed locations.

You can put it to use in a wide variety of environments: lakes, fjords, harbours, shallow marine, rivers, and even in aquaculture fish cages. The unique functionality offered using numerous transceivers, raw data logging and interfaces to secondary systems allow you to use the EK15 for fish stock assessment, studies of fish behavior and fish-plankton interactions, habitat mapping and ecosystem monitoring.

The Simrad EK15 is based on a small and ruggedized single beam Transceiver Unit and a dedicated transducer. The operational frequency is 200 kHz, which offers a very high resolution and high accuracy. You can use the Simrad EK15 with up to 15 Transceiver Units. These will operate in parallel with either simultaneous or sequential pinging. Using multiple transceivers you can monitor large areas with only a single echo sounder system.

Support information

If you need technical support for your Simrad EK15 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>.

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- **Website:** <http://www.simrad.com>

Getting started

This chapter describes how to get started with the basic operation of the EK15.

It contains a 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 EK15 so that you can familiarize yourself with the menus, dialog boxes and display presentations.

Are you going to power up the Simrad EK15 for the first time?

If you are about to switch on your Simrad EK15 system for the very first time, see first *Installation* on page 38. It provides relevant hardware and software procedures for initial start-up and configuration.

Have you installed at least one frequency channel?

This chapter assumes that the Simrad EK15 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 41.

Topics

- *Power on/off procedures* on page 13
- *Starting normal operation* on page 15
- *Operating principles* on page 24
- *Presentation overview* on page 26
- *Context sensitive on-line help* on page 31

Power on/off procedures

These procedures explain how to switch the EK15 system on and off.

Note

*When you power up the EK15 for the very first time, observe the procedures in chapter *Installation* on page 38.*

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 press 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 EK15* on page 13
- *Powering down the EK15* on page 14

Powering up the EK15

Purpose

This procedure explains how to power up the Simrad EK15 system.

This procedure assumes that you have connected one or more transceiver to the EK15. If this is not the case, observe the relevant start-up procedure in chapter *Installation*.

Related topics

- *Setting operational mode 'Normal' to start 'pinging'* on page 16
- *Starting normal operation* on page 15
- *Checking the bottom detector settings* on page 18
- *Setting up the EK15 transceiver(s) for the first time* on page 40
- *Operation menu* on page 34

Procedure

- 1 Verify that the transceiver(s) are switched on.

The Single Beam Transceiver (SBT) 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 EK15 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 Processor Unit (computer).

Wait for the operating system to start up.

- 4 Double-click the EK15 icon on the desktop to start the program.

- 5 Wait while the program starts on the computer.

- 6 Choose user settings.

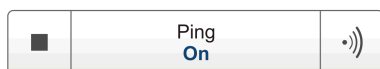
During the program load, a dialog box appears to let you choose from the current user settings available on the EK15.

The dialog box 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 box on the **Main** menu.

- 7 Observe that the program presentation fills the entire screen.

Important

When the EK15 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.

→ *Setting operational mode 'Normal' to start 'pinging' on page 16*

- 9 Observe that the EK15 starts.

The EK15 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 EK15 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 EK15 to display the wrong depth. In these cases the sounder may display the bottom at 0,0 meters. In order to aid the EK15 to locate the correct depth, observe the dedicated procedure.

Powering down the EK15

Purpose

This procedure explains how to power off the Simrad EK15.

Note

You must never switch off the EK15 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 in the program.
It is located on the **Title Bar** in the top right corner of the display presentation.
- 2 Observe that the program 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 Single Beam Transceiver (SBT) 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 EK15 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 EK15 system, you are ready to start the actual operation.

When started up, the EK15 will automatically apply its previous setup parameters.

The procedures assume that the EK15 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 41

These procedures are partly provided to get you acquainted with the basic functionality provided by the EK15, partly to set up the system for normal use, and partly to start normal operation.

Topics

- *Setting operational mode 'Normal' to start 'pinging'* on page 16
- *Selecting menu language* on page 16
- *Checking the transceiver and transducer settings* on page 17
- *Checking the bottom detector settings* on page 18
- *Checking the colour scale settings* on page 19
- *Changing the colour scale to remove the weakest echoes* on page 20
- *Checking the echogram settings* on page 20
- *Checking the range settings* on page 22
- *Saving the current user settings* on page 23

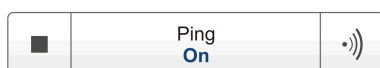
Setting operational mode 'Normal' to start 'pinging'

Purpose

This procedure explains how to set up the EK15 for normal operation and start 'pinging'.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the EK15 presentation.
- 2 Click the **Operation** icon.
This icon is located under the **Main** menu. It is used to open the **Operation** 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

Purpose

The menu buttons – as well as other texts – in the EK15 presentation are available in several languages. This procedure explains how to select a different language.

Related topics

- *Display menu* on page 35

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the EK15 presentation.
- 2 Click the **Display** button to open the menu.
This button is located under the **Main** menu. It is used to open the **Display** submenu.
- 3 Click the middle of the **Language** button to open a submenu with the 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 submenu closes, 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 EK15 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 EK15. If your language is *not* offered, the English on-line help will appear.

Checking the transceiver and transducer settings

Purpose

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**.
- 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 box.



The purpose of the **Transceiver Installation** dialog box is to set up the necessary parameters to connect the EK15 computer to the transceiver(s) and the transducer(s).

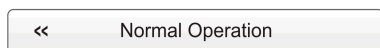
- 4 Check that all applicable transceivers and transducers are connected and operational.
For each transceiver, this is indicated by the green label with text “Installed”.
If a problem exists, refer to the relevant procedure in the *Operational procedures* chapter. This chapter is located in the EK15 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 box.

- 6 Click the **Operation** icon.

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



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



The purpose of the **Normal Operation** dialog box 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 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 box.

Checking the bottom detector settings

Purpose

This procedure explains how to set up the bottom detector parameters (minimum and maximum depth) using the **Bottom Detector** dialog box. Use these parameters if the EK15 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.



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



The purpose of the **Bottom Detector** dialog box is to define the upper and lower depth limits most likely to be used during the EK15 operation. In this dialog box, 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 EK15 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 box.

Checking the colour scale settings

Purpose

This procedure explains how you can change the colour scale currently used for the EK15 presentation.

Description

Which colour scale to use is mainly a personal preference based on ambient light conditions, the nature of the echoes and your own 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.

However, as the number of colours can differ, and dedicated colour schemes can be used, this is not necessarily correct. A high numeric TVG value displays weak echo signals properly while the stronger signals saturate into the darker colours. A low numeric value displays strong echo signals properly. Weak signals below the lower limit of the colour scale are not displayed (the display background colour is used).

If you choose to use many colours, the resolution of the EK15 presentation is greatly improved. It is then easier to distinguish the difference between the various echoes of different size and/or target strength.

Related topics

- *Changing the colour scale to remove the weakest echoes* on page 20
- *Display menu* on page 35

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.

To change the number of colours in the colour scale, see the dedicated procedure.

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

This button is located under the **Main** menu. It is used to open the **Display** submenu.



- 4 On the **Display** menu, click **Colour Setup** to open the **Colour Setup** dialog box.



The purpose of the **Colour Setup** dialog box is to control the presentation colours used by the EK15.

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

Changing the colour scale to remove the weakest echoes

Purpose

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

Description

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 box on the **Display** menu.

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 Move the cursor to the left side of the colour scale.
Observe that the cursor changes shape to a dual arrow line.
- 3 Click on the left edge of the colour scale, keep the mouse button depressed, and drag the edge towards right.
- 4 Observe that the weakest colours are removed from the colour scale, and thus also the weakest echoes from the echogram presentation.
- 5 Release the mouse button.
- 6 In order to restore the weakest colours, click on the left edge of the current colour scale, and drag towards left.

Checking the echogram settings

Purpose

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 EK15 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 box; 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.

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 box.

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 box will by default only apply to this echogram.

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

Observe that the **Echogram** dialog box opens.

The **Echogram** dialog box 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 box, check that the **Lines** tab is shown.

The **Lines** tab in the **Echogram** dialog box 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 box 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 box 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 box.

Checking the range settings

Purpose

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.

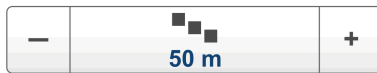
- 2 Click in a surface related echogram to make it “active”.

- 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.

Example 1 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 2 Start Range in a surface related 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 3 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

Purpose

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 EK15 operational parameters for future use.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the EK15 presentation.
- 2 On the **Main** menu, click **User Settings** to open the **User Settings** dialog box.



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

- 3 In the **Factory Settings** list, click the requested factory setting.
- 4 Click **Activate Selected Setting**.
- 5 In the **Setting** dialog box, click **OK** to accept the suggested name.
- 6 You can also choose a different name.

If you have a keyboard connected to the EK15 computer, you can click in the text field, remove the suggestion, and type any name.

Tip

If you do not have a computer keyboard connected to your EK15 system, click the **Keyboard** button to open an on-screen keyboard.

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

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

Operating principles

Like most computerized applications, the EK15 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 press 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.

Related topics

- *The menu buttons* on page 29

Cursor

The mouse (or trackball) controls the cursor movement on the EK15 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 dialog boxes. Observe that the shape of the cursor changes over the menu buttons to indicate which choices you have to control these parameters.

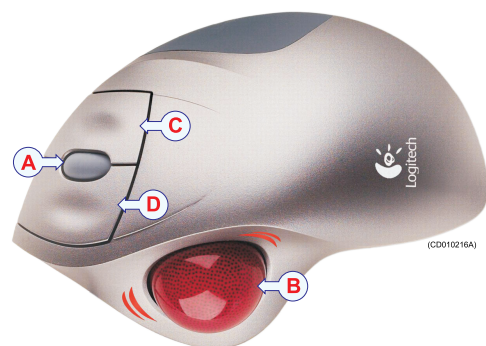
Mouse

The computer mouse can be used to control the functionality provided by the EK15. The mouse controls the movements of the cursor, and the buttons are used to click on buttons and select parameters.

Trackball

All EK15 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. Trackballs come in several shapes and sizes. A generic version is shown as an example only.

- 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*



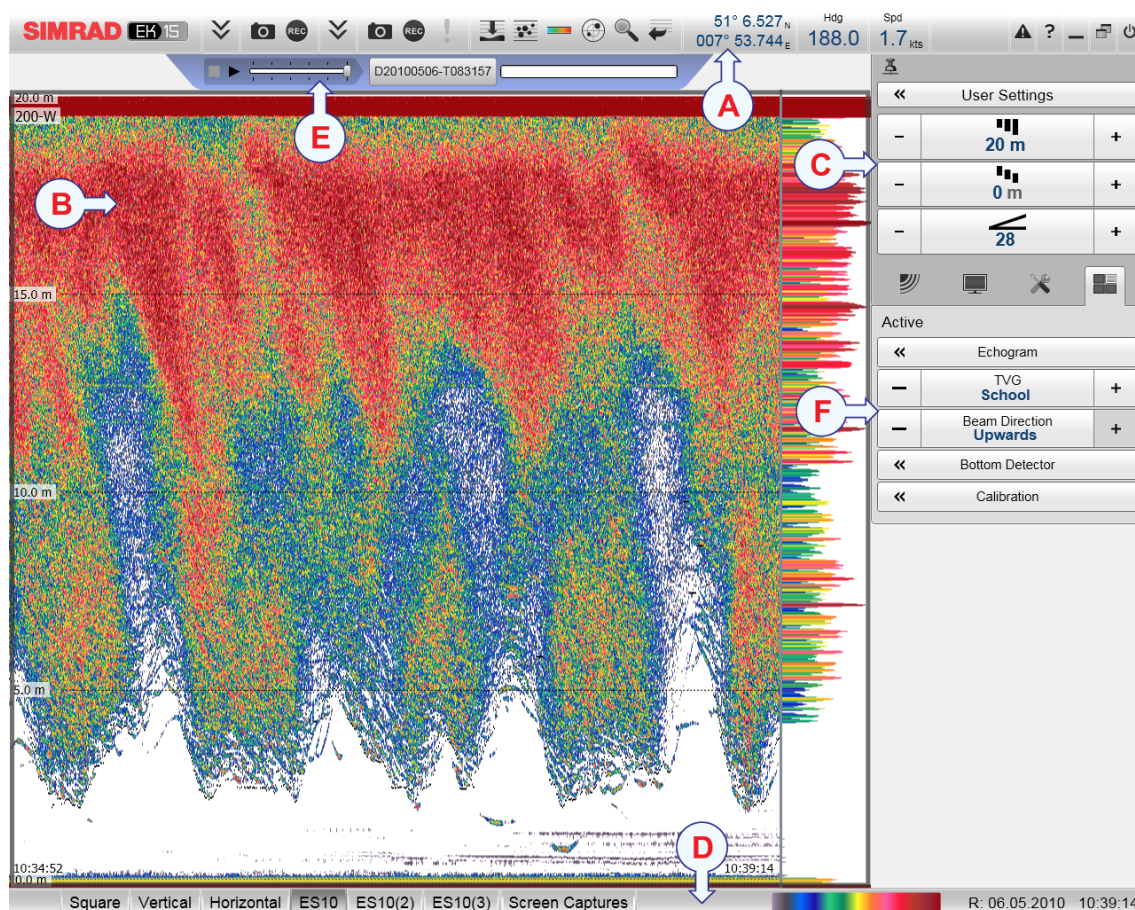
Presentation overview

The display presentation offered by the Simrad EK15 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 26
- *Title Bar* on page 27
- *Status Bar* on page 28
- *The menu system* on page 29
- *The menu buttons* on page 29

Echo sounder presentations



A typical EK15 display presentation is shown.

Note that the presentation is shown in mode *upwards* with the transducer positioned at the bottom looking up.

A Title Bar

B Echogram(s)

The **Echogram(s)** take up the largest part of the EK15 display presentation.

C Menu system**D Status Bar**

The **Status Bar** is located at the bottom of the EK15 presentation.

E Replay Bar

During replay a dedicated **Replay Bar** is provided below the **Title Bar**. The **Replay Bar** allows you to retrieve saved files, and to control the playback.

F Submenus

The submenus are opened and closed by clicking the buttons at the bottom of the **Main** menu.

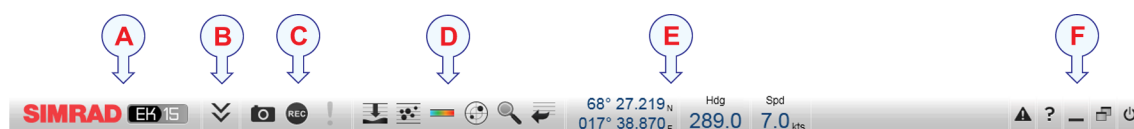
**G Information panes**

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 EK15 **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 Simrad as the manufacturer of the EK15, and the product name.

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 fields providing current data related to the vessel movements.

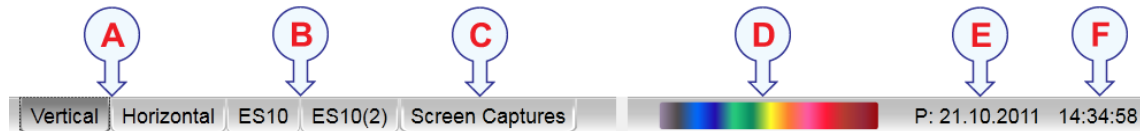
F Function buttons

These buttons are used to control basic system functions.

Status Bar

The **Status Bar** is located at the bottom of the EK15 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.

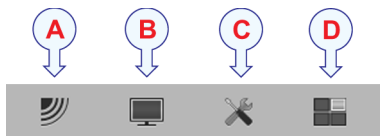
The menu system

The menu system on the EK15 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 box, 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 EK15 is done using a tree structure with a main menu, a set of submenus, and several menu buttons. Some of the menu buttons open dialog boxes or submenus to offer additional choices.

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



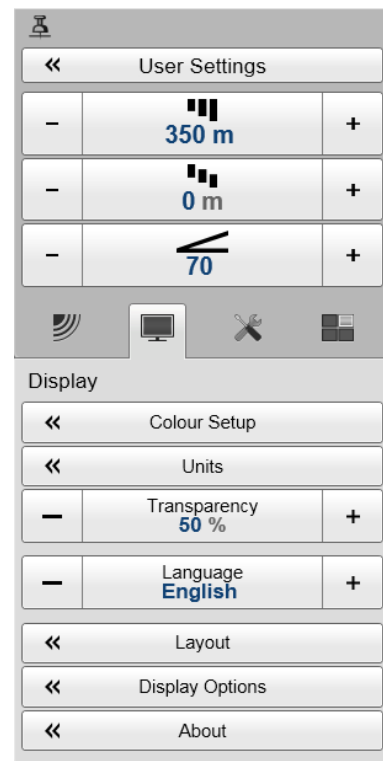
Below the main menu, dedicated buttons are used to open the submenus. These are (from left):

- 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.

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



f You can open a dedicated dialog box.

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 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 value.
- 3 Release the scroll wheel when the requested value is shown.



How to select a parameter using a submenu

- 1 Click the middle section of the button to open a submenu, then click the requested command, option or button.

The chosen value is applied, and the submenu is automatically closed.

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



How to select parameters using a dialog box

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



Context sensitive on-line help

The EK15 is provided with an extensive context sensitive on-line help system. All information of the *EK15 Reference manual* is also provided in the on-line help. The on-line help is located in a single proprietary Microsoft CHM file. This CHM file will also run on any other computer provided that the computer runs a Microsoft operating system.

To open the help system, click the **Help** button in any dialog box. This will provide instantaneous information about the relevant dialog box with links to related procedures and other topics.

Navigation in the on-line help file is made by means of the menu system on the left side, as well as the interactive links in the document.

The menu system

The menu navigation employed by the EK15 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 submenus. Menu choices shown in dark colours are not available for the current operation or operational mode.

Tip

This chapter only provides the purpose of each function and dialog box. If you wish to learn more about the functionality and the parameters offered, refer to the *Simrad EK15 Reference manual* or the context sensitive online help.

Topics

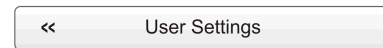
- *Main menu* on page 33
- *Operation menu* on page 34
- *Display menu* on page 35
- *Setup menu* on page 36
- *Active menu* on page 37

Main menu

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

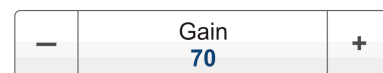
1 User Settings

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

4 Gain

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

Submenus

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

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.



Tip

For detailed information about every function, button and dialog box, refer to the *EK15 Reference manual* or to the context sensitive on-line help.

Operation menu

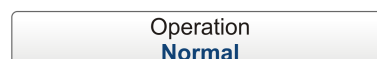
The following functions and parameters are available from the **Operation** menu.



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 EK15. You can set it to *Normal*, *Replay* or *Inactive*.



2 Ping

The purpose of the **Ping** function is to enable or disable the EK15 audio transmissions into the water (“pinging”).



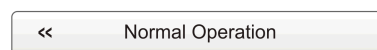
3 Ping Mode

The **Ping Mode** function is used to control how often the EK15 shall transmit its energy into the water. For normal use, choose *Maximum*. This will allow the EK15 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 box 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 echogram information, and save this on the Processor Unit’s hard disk. The raw data files can later be copied or moved to other recordable media, or to another computer on the network.

Tip

For detailed information about every function, button and dialog box, refer to the *EK15 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 box is to control the presentation colours used by the EK15.

<< Colour Setup

2 Units

The purpose of the **Units** dialog box is to control the units of measurements used by the EK15.

<< Units

3 Transparency

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

— Transparency 50% +

4 Language

The purpose of the **Language** function is to select the language to be used on the menus and elsewhere in the graphical user interface.

— Language English +

5 Layout

The purpose of the **Layout** dialog box 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.

<< Layout

6 Display Options

The purpose of the **Display Options** dialog box 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.

<< Display Options

7 About

The **About** dialog box allows you to see the current EK15 software version.

<< About

Tip

For detailed information about every function, button and dialog box, refer to the *EK15 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 box is to set up the EK15 to operate alone, or as a master or slave in a synchronized system. Synchronization is required in order to avoid interference if the EK15 is used simultaneously with other hydroacoustic instruments within the same frequency range.

<< Synchronization

2 Annotations

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

<< Calculation Interval

<< Annotations

<< Navigation

<< Ethernet Output

<< Depth Output

3 Calculation Interval

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

Installation

4 Navigation

The **Navigation** dialog box controls how the EK15 receives information from external peripherals, such as navigation and gyro compass systems.

5 Ethernet Output

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

6 Depth Output

The **Depth Output** dialog box is used to set up the output of depth data from the EK15 to a dedicated communication port on a specified format.

7 Installation

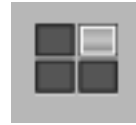
The **Installation** function opens a small submenu with access to the functions and dialog boxes required to set up the EK15 for operational use.

Tip

For detailed information about every function, button and dialog box, refer to the *EK15 Reference manual* or to the context sensitive on-line help.

Active menu

The **Active** menu is context sensitive. This means that it is empty until you click in a view on the EK15 presentation. The chosen view will appear with a thicker frame to indicate that it is “active”. The **Active** menu will then offer a selection of functions relative to the active view. The **Active** menu will thus change from different views and different presentation formats



While the illustration shown here only provides a limited amount of choices, the list holds all the options.

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 box 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.

<< Echogram

— TVG **School** +

— Beam Direction **Downwards** +

2 TVG

The **TVG** (Time Variable Gain) function allows you to compensate the received data for loss due to geometric spread.

<< Bottom Detector

<< Calibration

3 Beam Direction

The purpose of the **Beam Direction** function is to turn the echogram presentation up-side down. This is typically used if the EK15 transducers are located at the bottom of a fish cage looking upwards.

4 Bottom Detector

The purpose of the **Bottom Detector** dialog box is to define the upper and lower depth limits most likely to be used during the EK15 operation. In this dialog box, you can also modify the setting for **Bottom Backstep** to change the bottom detection relative to the bottom echo.

5 Calibration

The purpose of the **Calibration** dialog box is to accept the reference target and measured target results from the system calibration.

Tip

For detailed information about every function, button and dialog box, refer to the *EK15 Reference manual* or to the context sensitive on-line help.

Installation

These are the specific procedures required to get you started with the Simrad EK15. 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 39
- *Installation of the EK15 software* on page 39
- *Setting up the EK15 transceiver(s) for the first time* on page 40
- *Installing frequency channels* on page 41
 - *Main procedure* on page 40
 - *Installing frequency channels* on page 41
 - *Starting normal operation* on page 43
- *Changing the IP addresses when more than one transceiver is used* on page 44

Installation of the system units

This procedure explains the basic principles of EK15 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 EK15 is located on the media device provided with the delivery. The documents can also be downloaded from <http://www.simrad.com>.

WARNING

The Simrad EK15 transducer (200–28CM) is not designed for hull mounting!

Procedure

- 1 Install the various hardware units (transceiver(s), computer(s) and transducer(s).
- 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 from each transceiver to the Ethernet switch, and one Ethernet cable from the switch to the computer.
 - d Connect the necessary cables to the display; power and video.
- 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 EK15, and proceed with the next procedure; software installation.

Related topics

- *Installation of the EK15 software* on page 39

Installation of the EK15 software

Purpose

Use this procedure when you wish to install the EK15 software on a computer.

Note

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

Related topics

- *Setting up the EK15 transceiver(s) for the first time* on page 40
- *Powering up the EK15* on page 13

Procedure

- 1 Power up the computer.

- 2 Insert the EK15 software media.
If the EK15 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 flash drive.
- 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 box 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 program.
- 7 If you use **Windows 7** operating system:
 - a Observe that **Windows 7 Firewall** will open a dialog box requesting information about the network.
Select *Public*, and click **Allow access**.
 - b The operating system may also open other dialog boxes to verify that the EK15 software can run on the computer. You must permit this.
- 8 Observe the relevant start-up procedure.

Setting up the EK15 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 40
- *Installing frequency channels* on page 41
- *Starting normal operation* on page 43

Main procedure

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

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 EK15 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® 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: 157.237.14.60
Subnet mask: 255.255.255.0
 - f Click **OK** to save the settings.
 - g Exit all dialog boxes.
- 2 On the computer, start the EK15 program.
 - 3 Set up the transceiver(s) and transducer(s).
 - 4 Start normal operation.

Related topics

- *Installing frequency channels* on page 41
- *Starting normal operation* on page 43

Installing frequency channels

Purpose

This procedure explains how to install a frequency channel.

Description

Each EK15 transceiver with its transducer and (single) frequency is referred to as a frequency channel.

The upper part of the **Transceiver Installation** dialog box displays a list of frequency channels which either are, or have been, installed on the EK15. For each channel on the list, a **Status** label is provided.

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

- **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 EK15 system.
- **Lost:** This frequency channel can not be used.
- **Available:** This frequency channel is vacant and ready for use.

Related topics

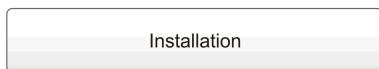
- *Setup menu* on page 36
- *Checking the transceiver and transducer settings* on page 17

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 box.



The purpose of the **Transceiver Installation** dialog box is to set up the necessary parameters to connect the EK15 computer to the transceiver(s) and the transducer(s).

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

The EK15 will automatically search the network for transceivers.

- 4 Observe that all the frequency channels are listed in the dialog box.

- 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.

On the EK15, choose transducer **200–28CM** as default. Other transducers can also be used.

- 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 box.

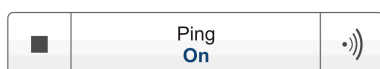
Starting normal operation

Purpose

This procedure explains how to set up the EK15 for normal operation and start ‘pinging’.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the EK15 presentation.
- 2 Click the **Operation** icon.
This icon is located under the **Main** menu. It is used to open the **Operation** 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’.



Installing a frequency channel

Purpose

This procedure explains how to install a frequency channel.

Description

Each EK15 transceiver with its transducer and (single) frequency is referred to as a frequency channel.

The upper part of the **Transceiver Installation** dialog box displays a list of frequency channels which either are, or have been, installed on the EK15. For each channel on the list, a **Status** label is provided.

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

- **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 EK15 system.
- **Lost:** This frequency channel can not be used.
- **Available:** This frequency channel is vacant and ready for use.

Related topics

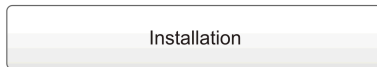
- *Setup menu* on page 36
- *Checking the transceiver and transducer settings* on page 17

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 box.



The purpose of the **Transceiver Installation** dialog box is to set up the necessary parameters to connect the EK15 computer to the transceiver(s) and the transducer(s).

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

The EK15 will automatically search the network for transceivers.

- 4 Observe that all the frequency channels are listed in the dialog box.
- 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.

On the EK15, choose transducer **200–28CM** as default. Other transducers can also be used.

- 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 box.

Changing the IP addresses when more than one transceiver is used

Purpose

This procedure explains how to modify this IP address.

Description

The transceivers are provided by Simrad readily set up with a fixed Ethernet address and an IP address. If your EK15 uses two or more transceivers, these will by default have different Ethernet addresses, but identical IP addresses. In order for your system to work, all transceivers must have unique IP addresses.

If you have bought complete EK15 system that includes a computer and the required number of transceivers, this configuration was done at the factory. However, if you have purchased your own computer, and adds additional transceivers to an existing system, you must do this yourself, or leave it to your dealer.

Related topics

- *Setup menu* on page 36

Procedure

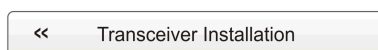
- 1 Click the **Setup** icon.

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 box.



The purpose of the **Transceiver Installation** dialog box is to set up the necessary parameters to connect the EK15 computer to the transceiver(s) and the transducer(s).

- 3 Observe that the current frequency channels are listed in the dialog box.
- 4 Click once on the frequency channel you wish to modify.
- 5 Observe that the relevant transceiver parameters are shown in the **Transceiver Information** field
- 6 Set the transducer(s) to *None*, and click **Apply**.
- 7 Click **Change IP Address** to open the **IP Address** dialog box.

Note

*If you have two Ethernet cables connected to your computer, you may need to disconnect the Ethernet cable to the ship's network before the **Change IP Address** is available.*

- 8 Enter a new IP address

Tip

Change only the last digit in the IP address.

Tip

If you do not have a computer keyboard connected to your EK15 system, click the **Keyboard** button to open an on-screen keyboard.

- 9 Click **OK** to save the current settings and close the dialog box.
- 10 In the **Transceiver Installation** dialog box, observe that the IP address for the chosen transceiver has changed.

- 11 Install the transducers for the channel with the new IP address.

Note _____

Make sure that you choose the correct transducer(s)!

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

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