

Quick start guide

Simrad PI50

Catch monitoring system





KONGSBERG

Simrad PI50

Quick start guide

This manual provides you with the basic information required to get you started with the Simrad PI50. For a more detailed description of the operation, see the *Simrad PI50 Operator manual*. If you wish to investigate the complete functionality, including menus and all parameters, refer to the *Simrad PI50 Reference manual* or the online help.

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Rev.C	2015-02-09	Changed to describe SW version 1.3.1. Information about new PI60 Sensor Receiver with 10 channels.

License information

When you have obtained the necessary licenses to operate the PI50, 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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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 PI50.

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 PI50 Operator manual* or the *Simrad PI50 Reference manual*.

Target audience

The manual is intended for all inexperienced and new users of the Simrad PI50.

We assume that you are familiar with the basic acoustic principles of sound in water, and that you have some experience with the operation of catch monitoring systems

Click “Help”!

Installed on your Simrad PI50 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 PI50 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

License information

The Simrad PI50 is a licensed product. In order to obtain a license, contact your local dealer.

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Simrad PI50

Study this chapter to familiarize yourself with the Simrad PI50.

Topics

- *Important* on page 7
- *System description* on page 8
- *Support information* on page 11

Important

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

When the PI50 is not used

When you do not use the PI50, switch off the display and the computer.

If you know that you will not use the PI50 for a long time, we recommend that you also switch off the Sensor Receiver. Since this unit is provided with a power switch, you must disconnect the power cable.

Related topics

- *Powering off the PI50* on page 14

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 11

When you switch off the PI50

You must NEVER switch off the PI50 by means of the on/off switch on the computer.

You must ALWAYS exit the PI50 application by clicking the **Exit** icon on the **Title Bar**.

If you power down the PI50 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 off the PI50* on page 14

System description

To know how your gear behaves is vital for efficient fishing. The Simrad PI50 system gives you all the details.

The Simrad PI50 is designed for the professional fishery community implementing the latest innovations and technology.

The system provides you with essential information, such as the stability of the trawl doors, the amount and quality of your catch, the behaviour of your bottom or pelagic trawl, or the correct timing of a purse seine.

As such, the catch monitoring system allows you to stay in full control of the gear and its behaviour.

The system is designed to be equally useful for all fishing types. Bottom trawlers, pelagic trawlers, purse or danish seiners - whatever kind of gear you use, all vessels can take advantage of the functionality provided by the PI50.

A large selection of wireless sensors is available for the Simrad PI50. Placed on the trawl, purse seine or danish seine they will provide you with valuable and accurate information about the gear, its behaviour and the environment.

System units

The Simrad PI50 comprises the following main units.

Topics

- *Colour display* on page 9
- *Processor Unit* on page 9
- *Sensor Receiver* on page 9
- *Hydrophones* on page 10
- *Catch monitoring sensors* on page 11

Colour display

A commercial display is used with the Simrad PI50 system.

Note that the display is not a standard part of the PI50 delivery.

Processor Unit

The Simrad PI50 system is designed to be controlled by a commercial maritime computer. This computer must be based on the Microsoft Windows® 7 operating system. It must further be designed for rugged use, and should be able to withstand the vibrations and movements of a vessel.



The computer is normally mounted in the wheelhouse.

Note that the computer is not a standard part of the PI50 delivery. Simrad may provide a suitable maritime computer. Consult your dealer for more information.

Sensor Receiver

The Simrad PI50 uses a custom built Sensor Receiver.

Two Sensor Receiver types are available:

- The PI50 Sensor Receiver supports six channels
- The PI60 Sensor Receiver supports ten channels

It is housed in a small cabinet. All necessary input and output sockets easily available. The unit is powered by a small external power supply. The Sensor Receiver provides the following interfaces:

- Serial line cable to the Processor Unit.
- One hydrophone
- External power supply



The maximum length of the serial line cable between the Sensor Receiver and the Processor Unit is 50 meters.

Hydrophones

Two hull mounted hydrophones are available, one for purse seining operations, and one for trawl operations. You can install both, and then select active hydrophone by means of a selector box on the bulkhead.

Purse seine hydrophone

The hull mounted hydrophone for purse seining operations has a 90 degrees horizontal beam and a 30 degrees vertical beam to provide the PI50 with optimal reception from the sensors on a purse seine.

This specific beam pattern is especially suited for purse seining and the wide coverage area reduces the need for careful alignment.



Trawl hydrophone

The hull mounted hydrophone for trawling operations has a 50 degrees horizontal beam and a 30 degrees vertical beam to provide the PI50 with optimal reception from the sensors on a bottom or pelagic trawl.

This specific beam pattern is especially suited for trawling and the wide coverage area reduces the need for careful alignment.

Portable hydrophone

A portable hydrophone is also available. It is designed as a temporary measure until a fixed hydrophone can be installed at the vessel's next planned dry docking. It has an omnidirectional beam and a 50 meter integrated cable.

The cable is sheathed in polyurethane providing robust external protection to compliment its 150 kg tensile strength.

The cable is supplied on a reel for convenient retrieval and stowage, and is equipped with a plug for easy attachment to the Sensor Receiver.



Catch monitoring sensors

A large selection of catch monitoring sensors can be used with the PI50 system. The current software version supports the following sensors:

- PX MultiSensor
- PI Bottom Contact
- PI Catch
- PI Depth
- PI Spread
- PI Temperature
- PI Height
- PI Spread/Depth
- PI Twin Spread
- PI SeineSounder
- PI Geometry

Support information

If you need technical support for your Simrad PI50 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
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- **Website:** <http://www.simrad.es>

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

Getting started

This chapter describes how to get started with the basic operation of the PI50.

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 PI50 so that you can familiarize yourself with the menus, dialog boxes and display presentations.

Are you going to power up the Simrad PI50 for the first time?

If you are about to switch on your Simrad PI50 system for the very first time, see first *Initial installation and setup procedures* on page 36. It provides relevant hardware and software procedures for initial start-up and configuration.

Topics

- *Power on/off procedures* on page 14
- *Operating principles* on page 15
- *Presentation overview* on page 16
- *Starting normal operation* on page 21
- *Sensor views* on page 29
- *Context sensitive on-line help* on page 35
- *Initial installation and setup procedures* on page 36

Power on/off procedures

These procedures explain how to switch the PI50 system on and off.

Topics

- *Powering up the PI50* on page 14
- *Powering off the PI50* on page 14

Powering up the PI50

Purpose

This procedure explains how to power up the Simrad PI50 system.

Procedure

- 1 Power up the Sensor Receiver.

The Sensor Receiver is not fitted with an on/off switch. You may leave the unit permanently powered up. If you are not using the PI50 for a long period of time, disconnect the power supply.

- 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 PI50 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 PI50.

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.

Powering off the PI50

Purpose

This procedure explains how to power off the Simrad PI50.

Note

You must never switch off the PI50 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 top 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 Sensor Receiver.
The Sensor Receiver is not fitted with an on/off switch. You may leave the unit permanently powered up. If you are not using the PI50 for a long period of time, disconnect the power supply.

Operating principles

Like most computerized applications, the PI50 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 20

Cursor

The mouse (or trackball) controls the cursor movement on the PI50 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.

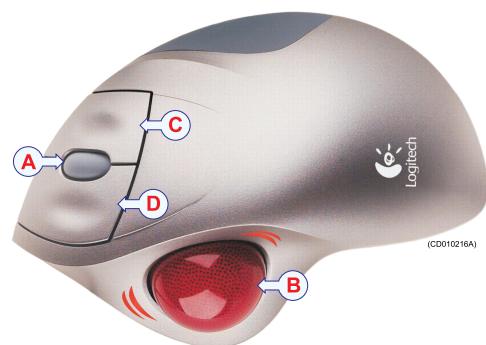
- Move the cursor over the menu and menu buttons, and click to alter the operational parameters and open dialog boxes. Observe that the shape of the cursor changes over the menu buttons to indicate which choices you have to control these parameters.

Mouse

The computer mouse can be used to control the functionality provided by the PI50. The mouse controls the movements of the cursor, and the buttons are used to click on buttons and select parameters.

Trackball

All PI50 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*

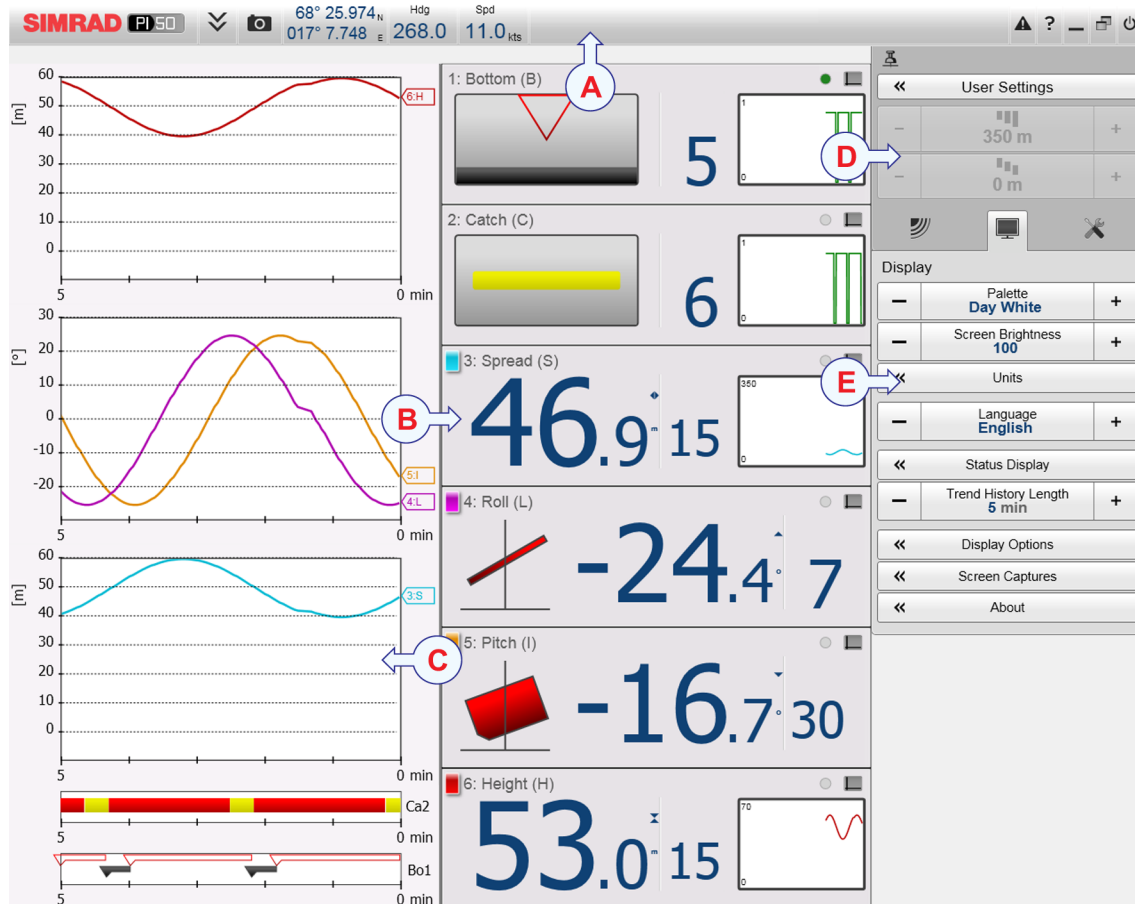
Presentation overview

The display presentation offered by the Simrad PI50 system provides a number of sensor views. It also provides a **Title Bar** and a menu system to facilitate operation using a computer mouse or a trackball.

Topics

- *Display organization on page 17*
- *Title Bar on page 18*
- *The menu system on page 19*
- *The menu buttons on page 20*

Display organization



A typical PI50 display presentation is shown.

Note that the presentation is made using artificial sensor data from the built-in simulator.

A Title Bar

B Sensor views

The information from each sensor is presented in a rectangle. “Dual” sensors use two channels, and they use two rectangles for presentation. The *Sensor* view holds the key information provided by sensor, as well as a *History* field. This is the small rectangle within the *Sensor* view. It offers the changes in the sensor data for the last 20 minutes.

C Trend views

For each sensor, you can also open a *Trend* view. This is a graph providing the historic values from the sensor. Both the vertical and horizontal resolutions of the graph can be adjusted.

Click **Range** and **Range Start** on the **Main** menu to control the vertical resolution.

Click **Trend History Length** on the **Display** menu to control the horizontal resolution (5 to 1440 minutes).

D Menu system

E Submenus

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



The presentation of the various views are made automatically, and the size of each view depends on the space available. When no *Trend* views are open, the *Sensor* views will stretch from the left to the right edge of the presentation. When a *Trend* view is opened, it will position itself on the left side, and the size of the *Sensor* views will be reduced by removing the *History* field. If additional *Trend* views are opened, they will be positioned on top of each other, and the vertical size of each view is adjusted automatically.

The order of the *Sensor* views is defined by the setting made in the **Select Sensors** dialog box. The location of the *Trend* views do not follow this order. The first trend view fills the entire vertical space, the next are placed on top of the first in the same order they are opened.

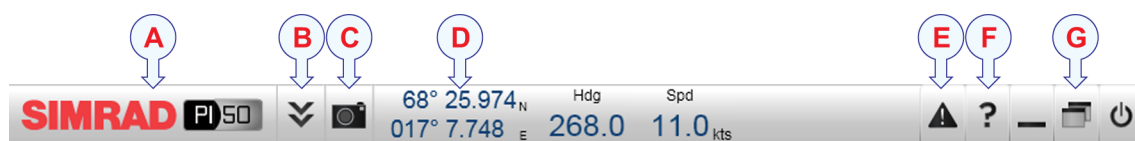
Related topics

- *Title Bar* on page 18
- *The menu system* on page 19
- *The menu buttons* on page 20

Title Bar

The PI50 **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 PI50, and the product name.

B Menu

Click this button to hide or recall the menu system.

C Screen capture

This button is provided to make it easy to make a screen capture.

D Navigation field

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

E Message

Click this button to open the **Messages** dialog box. This button will flash to indicate that a message is posted.

F Help

Click this button to open the context sensitive on-line help.

G Function buttons

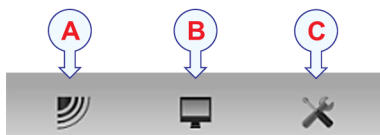
These buttons are used to control basic system functions.

The menu system

The menu system is by default located on the right hand side of the PI50 presentation.

The selection of operational parameters on the PI50 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):

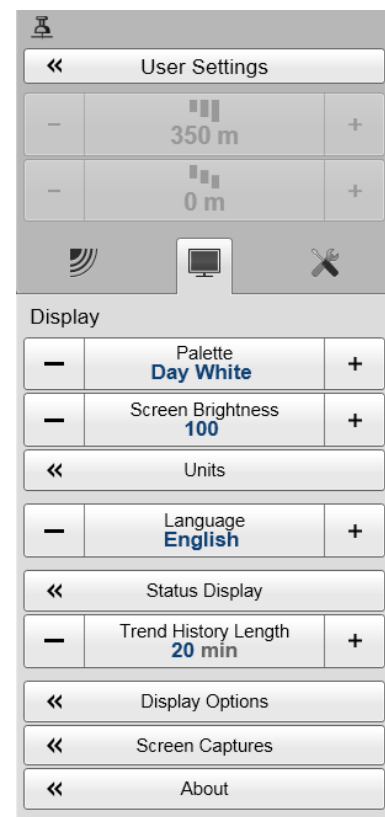
- A** The **Operation** menu controls the main operational parameters.
- B** The **Display** menu controls the visual aspects of the system, such as parameters related to the display presentation.
- C** The **Setup** menu allows you to control the configuration of the signal processing, as well as system installation and maintenance, and the interfaces to peripheral devices.

Tip

You can hide the menu from view if you do not need it. Click the **Menu** button on the **Title Bar** to hide the menu. Click one more time to retrieve it.

The text in the buttons can be changed to suit your preference by clicking **Language** on the **Display** menu.

You can also place the menu on the left side of the PI50 presentation by clicking **Menu** on the right side in the **Display Options** dialog box.



A detailed breakdown of the commands and parameters available in the menu system is provided in the *Menu system* chapter.

Related topics

- *The menu system* on page 40

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.

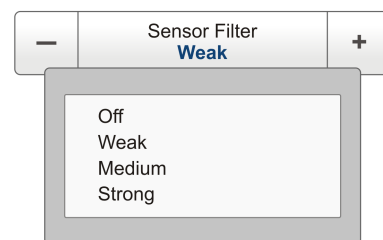


How to select a numerical parameter using the keyboard

- 1 Click the middle section of the button to open a text field.
- 2 Type 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 keep that value.
- 3 Press the **Enter** key.

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.



Starting normal operation

Once you have powered up the complete PI50 system, you are ready to start the actual operation.

When started up, the PI50 will automatically apply its previous setup parameters.

These procedures are partly provided to get you acquainted with the basic functionality provided by the PI50, partly to set up the system for normal use, and partly to start normal operation.

Topics

- *Selecting menu language* on page 22
- *Choosing PI50 factory default settings* on page 22
- *Selecting which sensors to use* on page 23
- *Saving the current user settings* on page 26
- *Calibration of the depth sensors* on page 27

Selecting menu language

Purpose

The menu buttons – as well as other texts – in the PI50 presentation are available in several languages. This procedure explains how to select a different language.

Related topics

- *Display menu* on page 43

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the PI50 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 PI50 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 PI50. If your language is *not* offered, the English on-line help will appear.

Choosing PI50 factory default settings

Purpose

This procedure explains how to choose the factory or saved parameter settings. Use this if you need to reset the PI50 to known settings.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the PI50 presentation.

- 2 On the **Main** menu, click **User Settings** to open the **User Settings** dialog.



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 Click **Close** to exit.

Selecting which sensors to use

Purpose

This procedure describes how you can select which sensor to use for a specific measurement, and how you can set up the sensor parameters.

Description

The PI50 allows you to put the entire PI and PX sensor range to use. However, you must select the sensors that you wish to use, set them up in the order you wish to see them on the screen, and select the operational parameters. Both the sensor selection and the parameter setup are done in the **Select Sensors** dialog box.

Tip

If you have several sensor configurations dedicated for different gears or different tasks, we strongly recommend that you save these for future use. Use the **User Settings** dialog box on the **Main** menu.

Related topics

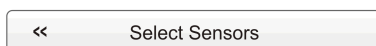
- *Saving the current user settings* on page 26

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the PI50 presentation.
- 2 Click the **Setup** icon.

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

- 3 Click **Select Sensors** to open the **Select Sensors** dialog box.



- 4 Observe the **Available Sensors** list on the upper left side of the dialog box. It lists all the sensor types supported by the PI50.
- 5 Click once a sensor type to select it.
- 6 Click the [►] button to copy the chosen sensor to the **Selected Sensors** list.



- 7 Repeat to select all requested sensors.

The PI50 system will keep track of the quantity of sensors you are adding to the **Selected Sensors** list. If you try to add too many sensors, a message will let you know.

If you need to remove a sensor from the **Selected Sensors** list, click on it, and then click the [◀] button.

- 8 In the **Select Sensors** dialog box, observe the items in the **Selected Sensors** list.

Tip _____

The order of the sensors in this list is also reflected to the order of the sensor view rectangles.

- 9 Click once a sensor type to select it.

- 10 Click one of the [▲] or [▼] buttons to move the sensor up or down on the list in the **Selected Sensors** field.

Tip _____

The order in this list also controls the order in which the sensors are presented in the **Sensor Configuration** field, as well as the vertical order of the sensor view rectangles in the PI50 display presentation.

- 11 Observe the list of sensors in the **Sensor Configuration** field at the bottom of the dialog.

- 12 For each sensor in the **Sensor Configuration** field:

- a Select **Label ID** (identification).

This number is used to identify the catch monitoring sensor.

The **Label ID** must be unique for each sensor, and we recommend that you let it match the physical label placed on the sensor. The number you choose will be used in the *Sensor* view.

Tip _____

The *order* in which the *Sensor* views are presented is defined by the order in the **Selected Sensors** list.

- b Select **Label Name**.

By default, the **Label Name** is the same as the sensor name listed with the **Available sensors**.

Click in the field to enter another name.

The **Label Name** is only shown in this dialog box, and you can use it to distinguish between otherwise identical sensors in the **Selected Sensors** list.

Tip

If you do not have a computer keyboard connected to your PI50 system, click the **Keyboard** button to open an on-screen keyboard.

c Select Update Rate.

This parameter is used to select the sensor's update rate. This is how often the PI50 can expect to receive information from the sensor.

Important

The Simrad PX MultiSensor is permanently set to *Normal* update rate.

To change the update rate for a PI sensor, use the **PI Configurator** program.

Note

*The **Update Rate** parameter is vital. The update rate you choose here must comply to the update rate programmed into the sensor. If these do not match, the communication will not work.*

*If you use the PX MultiSensor, the **Update Rate** is fixed, and you must always choose *Normal* update rate.*

d Select Sensor Value Name.

By default, the **Sensor Value Name** is the same as the sensor name listed in the **Available Sensors** list. If you have a keyboard connected to the PI50 computer, you can click in the field, and enter another name. You can also open the on-screen keyboard.

The **Sensor Value Name** is used in the *Sensor* views. If you are setting up a dual sensor, you can enter two different names, for example “Port door” and “Starboard door”.

Example 1 Sensor Value Name

If you have three catch sensors on your trawl, you can name them “20 Ton”, “40 Ton” and “60 Ton”.

e Select Channel Number.

This is the communication channel used between the catch monitoring sensor and the PI50 system.

If you use more than one sensors of the same type at the same time, the channel number of one of the sensors must be changed to make it unique for the sensor. This must be changed both in the actual sensor, and in the **Select Sensors** dialog box during configuration.

To change the channel number in the sensor, use either the **PI Configurator** or the **PX Configurator** program.

Note

*The **Channel Number** parameter is vital. The communication channel number you choose here must comply to the channel number programmed into the sensor. If these do not match, the communication will not work. By default, the channel number will match the factory setting.*

f Observe the Offset value.

Sensors measuring spread and depth can have an offset value.

The offset value for the depth sensors are determined during calibration.

The offset value for the spread sensor must be entered manually based on your knowledge about the physical locations of the sensors and the properties of the gear.

- 13** Click **Apply** to save the sensor configuration.
- 14** Check that all sensors are shown in the PI50 presentation.
- 15** Click **OK** to save the current settings and close the dialog box.
- 16** If you have several sensor configurations dedicated for different gears or different tasks, we strongly recommend that you save these for future use. Use the **User Settings** dialog box on the **Main** menu.

Saving the current user settings

Purpose

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

If you have several different sensor configurations dedicated for various gears or different tasks, we also strongly recommend that you save these.

Description

The settings saved using the **User Settings** functionality includes all receiver settings, interface parameters, as well as the currently selected sensors and their communication parameters. This is useful if you operate a combined trawler and seiner using different sensor setup on the different gears.

Procedure

- 1 Observe the **Main** menu. It is normally located on the right hand side of the PI50 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 Click **Save Current Setting**.
- 4 Type a name for the new setting.

Tip

If you do not have a computer keyboard connected to your PI50 system, click the **Keyboard** button to open an on-screen keyboard.

- 5 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 box.

Calibration of the depth sensors

Purpose

This procedure explains how to calibrate the depth sensor.

Description

Only depth sensors can be calibrated. The purpose is to make sure that the depth reported by the sensor is as accurate as possible. This procedure is done on board the vessel.

Note

In order to calibrate the sensor, it must be submerged in salt water.

The software provided for calibration assumes that the sensor is lowered to 1 meter deep. If you need to lower it even deeper, you will need to add this additional depth to the **Offset** value when you select and set up the sensor in the **Select Sensors** dialog.

Example 2 Depth sensor calibration

If you lower your sensor to 5 meters depth for calibration, you must enter 4 (meters) into the **Offset** for the sensor.

Procedure

- 1 Mount a rope to the top fastening lugs on the sensor.
- 2 Tighten the rope, and measure one meter from the bottom of the sensor to a spot on the rope. Place a visual marker on the rope at that location.

- 3 Lower the sensor over the side of the vessel and into the water. Lower it until the visual marker on the rope is even with the surface.

You may wish to use a different depth reference than the sea surface. If this is the case, change the marking on the rope to fit your preference, for example the depth of the keel or the depth of an echo sounder transducer.

It is also possible to attach the sensor 1 meter under a floating device. Test this arrangement before you use, and make sure that the pressure sensor on the depth sensor is located 1 meter below the sea surface when lowered into the water.

- 4 Observe the numerical presentation of the sensor depth, and allow the reading to stabilize itself.
- 5 Observe the **Main** menu. It is normally located on the right hand side of the PI50 presentation.
- 6 Click the **Setup** icon.

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

- 7 Click **Calibration**.



The purpose of the **Calibration** dialog box is to accept and apply the calibration information from the depth sensor calibration.

- 8 In the **Calibration** dialog, click **Start Calibration**.
- 9 Wait for the PI50 system to do the calibration.

When the **Calibration** dialog box closes, the calibration has finished. Click **Close** to close the dialog box.

- 10 Observe the numerical presentation of the sensor depth, and verify that it reads 1 m.
- 11 Retrieve the sensor from the water.

Sensor views

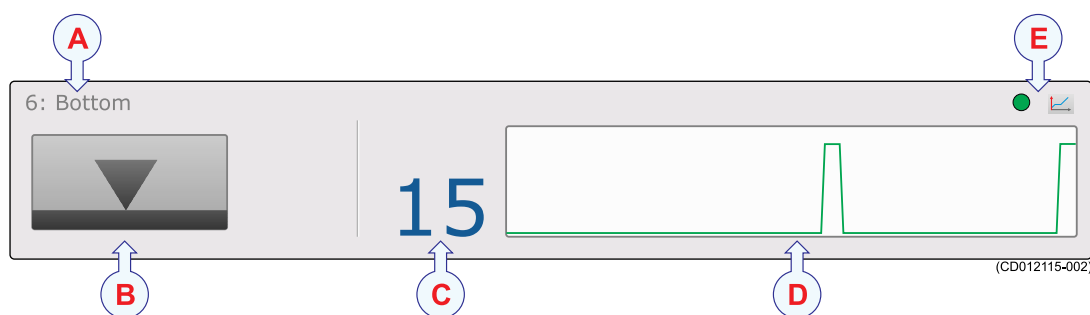
Each sensor providing measurement information to the PI50 system uses a dedicated rectangle – a *Sensor view* – to display this information.

The *Sensor view* rectangles are dynamic. This means that they change their size automatically. The text font and the amount of information in the rectangle will change as the rectangle is made larger or smaller. All the size adjustments are made automatically depending on how many sensors you have in use, and how much information you wish to see.

Topics

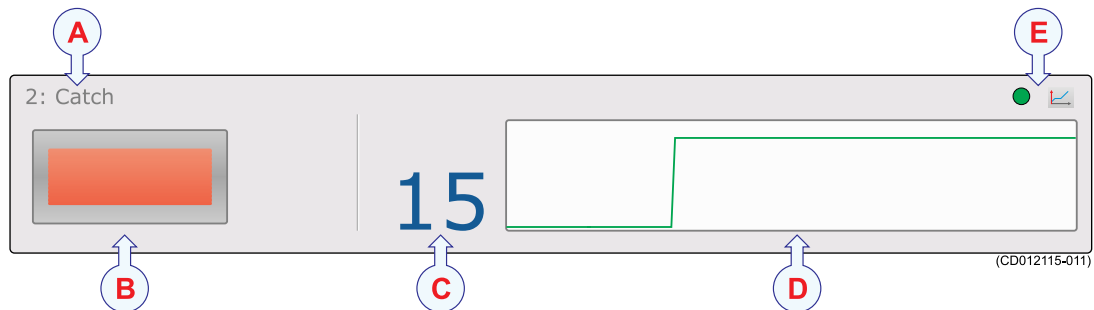
- “Bottom Contact” sensor view description on page 29
- “Catch” sensor view description on page 30
- “Depth” sensor view description on page 30
- “Height” sensor view description on page 31
- “Spread” sensor view description on page 31
- “Dual Spread” sensor view description on page 32
- “Temperature” sensor view description on page 32
- “Geometry” sensor view description on page 33
- “Height/Depth” sensor view description on page 34
- “Pitch” sensor view description on page 34
- “Roll” sensor view description on page 35

“Bottom Contact” sensor view description



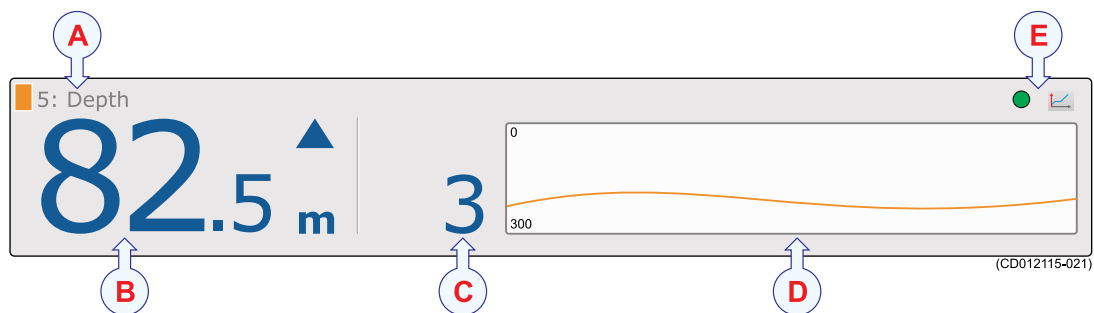
- A** Sensor identifier
- B** Bottom contact status
- C** Timer
- D** History field
- E** Pulse lamp and Trend view

"Catch" sensor view description



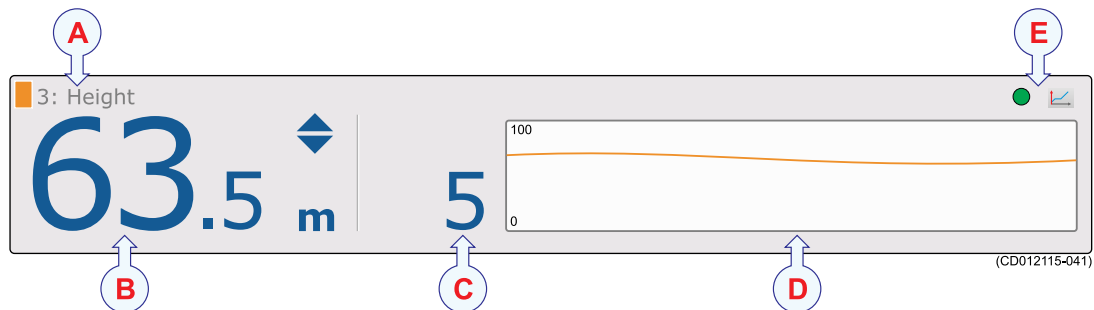
- A** Sensor identifier
- B** Catch status icon
- C** Timer
- D** History field
- E** Pulse lamp and Trend view

"Depth" sensor view description



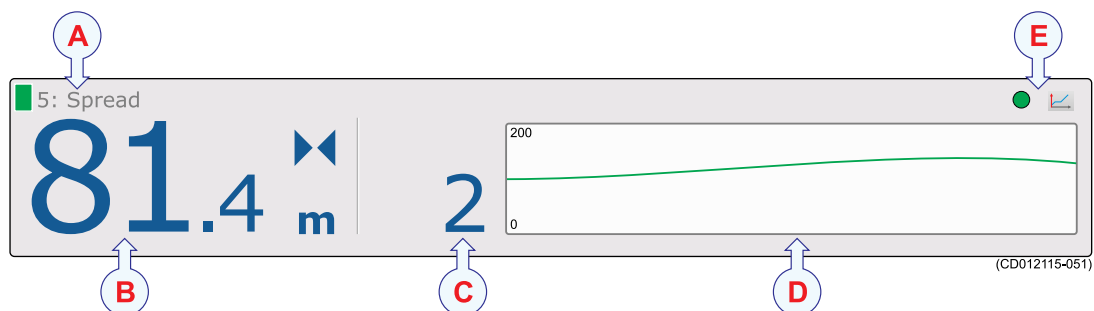
- A** Sensor identifier
- B** Current depth
- C** Depth changes
- D** History field
- E** Pulse lamp and Trend view

"Height" sensor view description



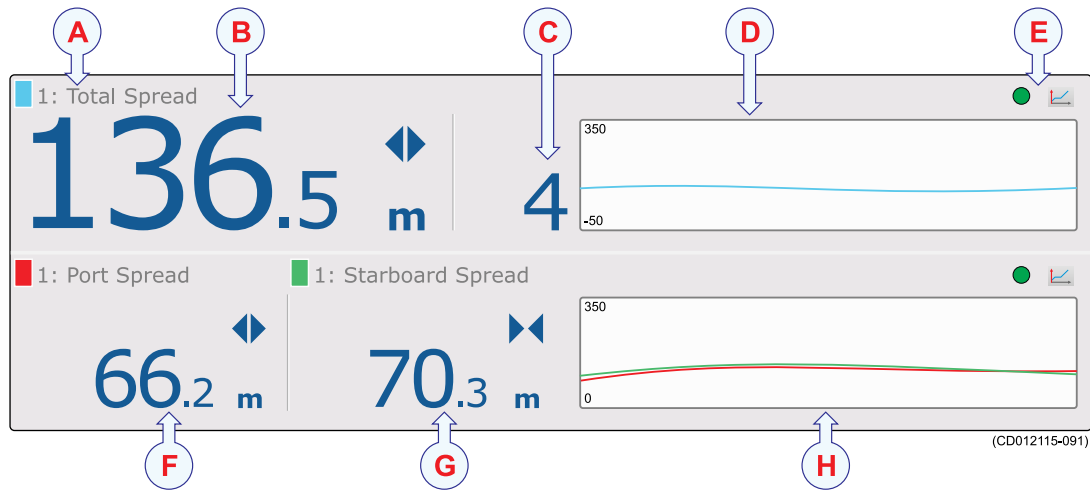
- A** Sensor identifier
- B** Current height
- C** Height changes
- D** History field
- E** Pulse lamp and Trend view

"Spread" sensor view description



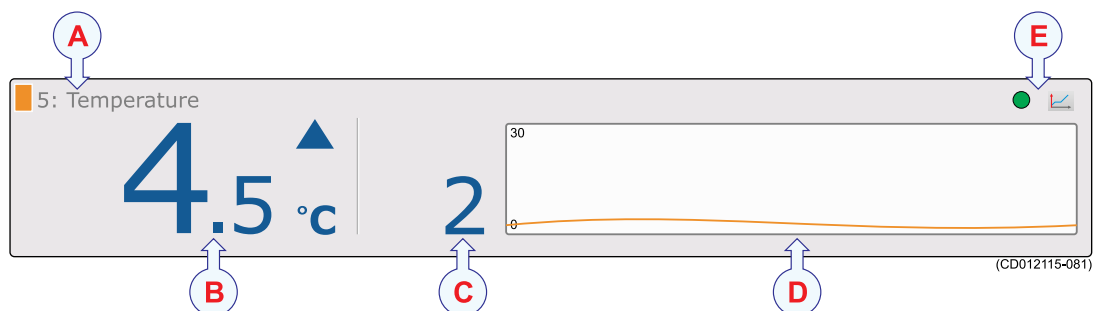
- A** Sensor identifier
- B** Current spread
- C** Spread changes
- D** History field
- E** Pulse lamp and Trend view

"Dual Spread" sensor view description



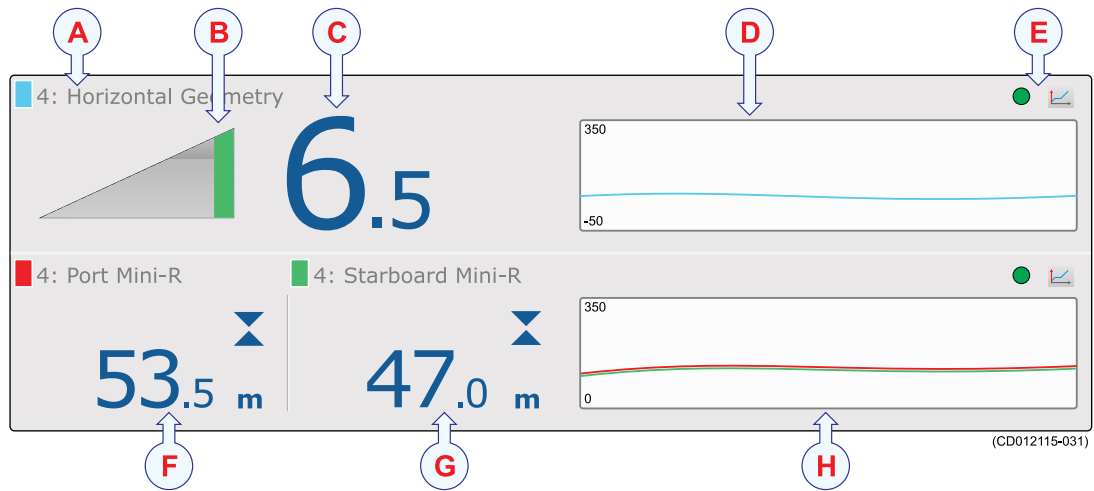
- A** Sensor identifier
- B** Total spread
- C** Spread changes
- D** History field
- E** Pulse lamp and Trend view
- F** Port spread
- G** Starboard spread
- H** History field

"Temperature" sensor view description



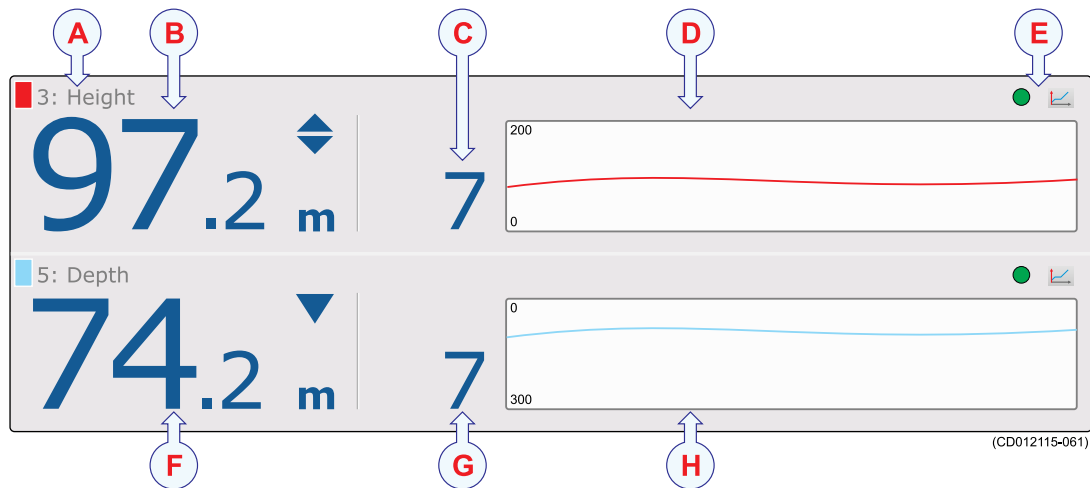
- A** Sensor identifier
- B** Current temperature
- C** Temperature changes
- D** History field
- E** Pulse lamp and Trend view

“Geometry” sensor view description



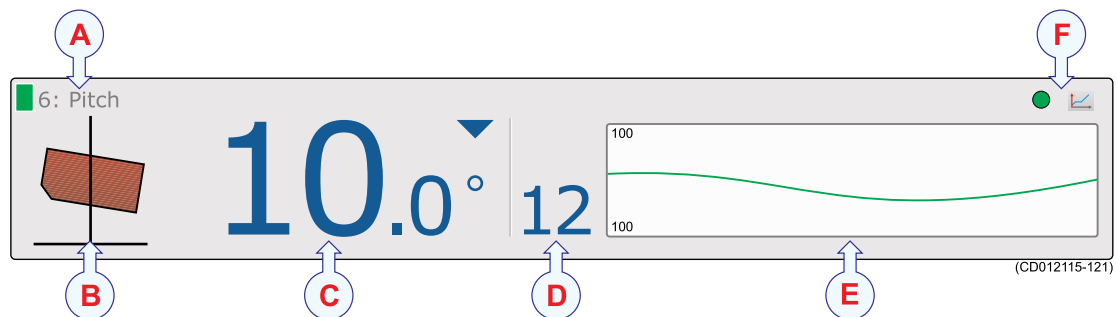
- A** Sensor identifier
- B** Geometry icon
- C** Length difference
- D** History field
- E** Pulse lamp and Trend view
- F** Port length
- G** Starboard length
- H** History field

"Height/Depth" sensor view description



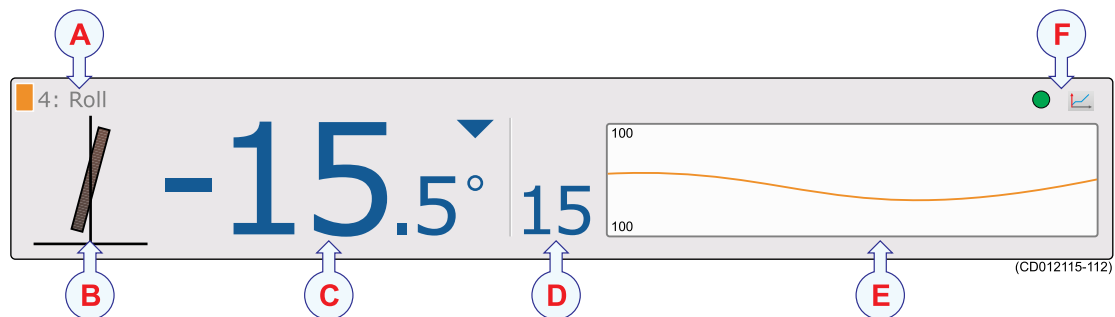
- A** Sensor identifier
- B** Current height
- C** Height changes
- D** History field
- E** Pulse lamp and Trend view
- F** Current depth
- G** Depth changes
- H** History field

"Pitch" sensor view description



- A** Sensor identifier
- B** Pitch icon
- C** Current pitch
- D** Pitch changes
- E** History field
- F** Pulse lamp and Trend view

"Roll" sensor view description



- A** Sensor identifier
- B** Roll icon
- C** Current roll
- D** Roll changes
- E** History field
- F** Pulse lamp and Trend view

Context sensitive on-line help

The PI50 is provided with an extensive context sensitive on-line help system. All information of the *PI50 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.

Initial installation and setup procedures

These are the specific procedures required to get you started with the Simrad PI50. 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 PI50 software on page 36*
- *Obtaining and installing the PI50 software license on page 37*
- *Setting up the interface between the Processor Unit computer and the Sensor Receiver on page 38*

Installation of the PI50 software

Purpose

Use this procedure when you wish to install the PI50 software on a computer.

Note

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

Related topics

Procedure

- 1 Power up the computer.
- 2 Insert the PI50 software media.
If the PI50 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.
- 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 PI50 software can run on the computer. You must permit this.
- 8 Observe the relevant start-up procedure.

Obtaining and installing the PI50 software license

Purpose

The PI50 requires a valid license to operate. This procedure explains how to obtain a license, and how to install it on your PI50 computer.

Without a license you will not be able to communicate with the Sensor Receiver.

Note

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

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

Procedure

- 1 Double-click the PI50 icon on the desktop to start the application.
- 2 Observe the **Main** menu. It is normally located on the right hand side of the PI50 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** submenu.



On the submenu, click **Software License** to open the **Software License** dialog box.



The purpose of the **Software License** dialog box is to allow you to enter a license code (text string) to unlock the PI50 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 box.
- 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 the Sensor Receiver
 - Hardware ID (as provided in the **Software License** dialog box)
- 7 When the software license is returned to you, start the PI50, open the **Software License** dialog box, 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 box.

Setting up the interface between the Processor Unit computer and the Sensor Receiver

Purpose

This procedure explains how to set up the communication between the Simrad PI50 computer and the Sensor Receiver. This is normally done only one time.

Description

Communication with the Sensor Receiver is based on a serial line and proprietary telegrams. You can only set up this communication with a licensed version of the PI50 software.

Important

If you purchase the PI50 Maritime computer, serial port A (1) is set up and activated for this interface. If you use your own computer, make sure that it is equipped with an RS-232 serial port. This is the only way you can communicate with the Sensor Receiver.

Physical cabling

The first step (with sub-steps) in this procedure explains how to do the physical cabling using the relevant connection. The remaining steps describe how to set up the interface parameters in the PI50 software.

Procedure

- 1** Connect the PI50 computer to the Sensor Receiver using a serial line.
 - a** Locate a free serial port that can be used for this communication.
 - b** On the chosen serial line socket on the PI50 computer (male connector), connect the RS-232 cable as follows:
 - Receive signal **Rx** on pin 2.
 - Transmit signal **Tx** on pin 3.
 - Common **Ground** on pin 5.
 - c** On the Sensor Receiver, use the only serial line socket available (female connector). Connect the RS-232 cable in a 1:1 configuration.

Note

The connection between the computer and the Sensor Receiver uses a 1:1 serial cable. A suitable cable with length 2 m is provided with the Transceiver Unit. If you need a longer cable, you can extend this cable, or make your own.

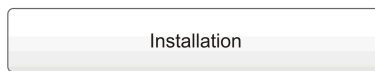
- d** Ensure that the total length of the serial line cable does not exceed approximately 50 meters.

If a longer cable is required, you may need to use buffer amplifiers on the serial line.

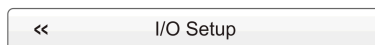
- 2 Click the **Setup** icon.

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** sub-menu.



On the menu provided, click **I/O Setup** to open the **I/O Setup** dialog box.



- 4 In the **I/O Setup** dialog, select which serial port to use for this communication.
- 5 Click on the chosen port to select it, then click the **Input** button to open the **Select Inputs** dialog box.
- 6 In the **Select Inputs** dialog, locate **PI50** on the left side, and click the [▶] button to connect it.
- 7 Click **OK** to save the current settings and close the dialog box.
- 8 In the **I/O Setup** dialog box, click on the chosen port to select it, then click the **Setup** button to open the **Serial Port Setup** dialog box.
- 9 In the **Serial Port Setup** dialog, enter the relevant parameters to set up the port.
 - Baud rate: 4800
 - Data bits: 8
 - Parity: None

Important

If you use your own computer, you may need to verify these settings in the operating system.

In Windows XP, right-click **My Computer** on the desktop. Then, click **Properties** → **Hardware** → **Device manager** → **Ports**.

In Windows 7, open **Computer** from the “Start” icon. Then, click **System properties** → **Advanced system settings** **Hardware** → **Device manager** → **Ports**.

Right-click on **Ports** to view and/or define communication properties.

- 10 Click **OK** to save the current settings and close the dialog box.
- 11 In the **I/O Setup** dialog box, click on the chosen port to select it, then click the **Monitor** button to open the **Port Monitor** dialog box.
- 12 Check the data flow on the input communication line.

In order to monitor this data flow, the peripheral system must be active and transmitting information to the PI50.
- 13 If the data flow is operational, close all dialog boxes.

The menu system

The menu navigation employed by the PI50 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 PI50 Reference manual* or the context sensitive online help.

Topics

- *Main menu* on page 41
- *Operation menu* on page 42
- *Display menu* on page 43
- *Setup menu* on page 44
- *Installation menu* on page 45

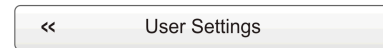
Main menu

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

The **Main** menu is presented in the *Main* mode on the PI50 start page.

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 maximum range of the sensors related to the physical length or depth measurements. The range is defined from a selected start range, and in horizontal or vertical direction to a value exceeding the bottom depth or the location of the sensor. Use this setting together with the **Start Range** parameter to set up the depth or distance scales in the *Trend* views.



3 Start Range

The **Start Range** function allows you to specify the start value for the depth or distance presentation in the sensor's history field. Use this setting together with **Range** to set up the depth or distance scales in the *Trend* views.

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 *PI50 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 Sensor Filter

The **Sensor Filter** can be used if you have problems with the reception. It will average the data received from the sensors.

2 Catch/Bottom Filter

The **Catch/Bottom Filter** is used to restrict the change of state from the catch and bottom contact sensors. This will reduce jitter in the presentation.

3 Multipath Filter

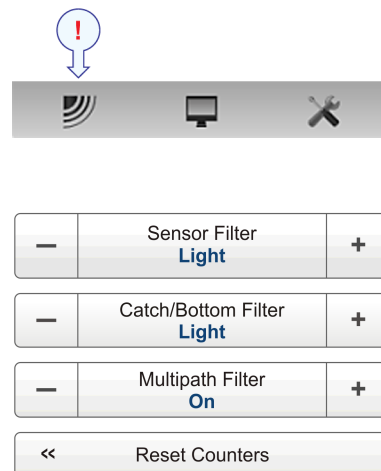
The **Multipath Filter** is designed to remedy for reflections, spikes and time-lag in the sensor data. These problems may occur if neighbouring channels are used, or if the PI50 is disturbed by other hydroacoustic systems in use on your own or other vessels.

4 Reset Counters

The **Reset Counters** function allows you to reset the built-in timer function.

Tip

For detailed information about every function, button and dialog box, refer to the *PI50 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 Palette

The purpose of the **Palette** function is to choose which colour theme to be used by the PI50 presentations.

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 box is to control the units of measurements used by the PI50.

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.

5 Status Display

The **Status Display** dialog box provides an overview of the current hydro-acoustical conditions.

6 Trend History Length

The **Trend History Length** function allows you to adjust the horizontal resolution of the *Trend* views.

7 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**.

8 Screen Captures

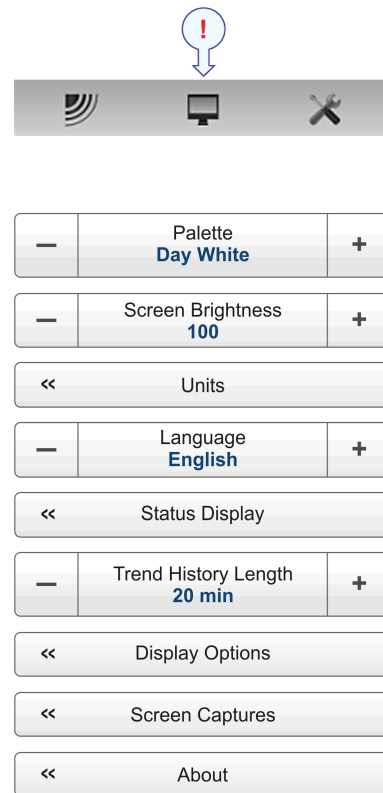
The **Screen Captures** function allows you to access the screen captures you have created using the **Screen Capture** button on the **Title Bar**.

9 About

The **About** dialog box allows you to see the current PI50 software version.

Tip

For detailed information about every function, button and dialog box, refer to the *PI50 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 Simulator

The **Simulator** will provide artificial sensor data to support hands-on PI50 training and functional testing.

2 Gear Type

The **Gear Type** function allows you to set up the PI50 to work with either a pelagic or a bottom trawl. The function is only used with Bottom Contact sensors.

3 Select Sensors

The **Select Sensors** dialog box allows you to define which sensors you will use to monitor your gear.

4 Alarm Limits

The **Alarm Limits** dialog box allows you to define alarms related to the information provided by the relevant catch monitoring sensors.

5 Calibration

The purpose of the **Calibration** dialog box is to accept and apply the calibration information from the depth sensor calibration.

6 Receiver

The **Receiver** dialog box allows you to set up the detailed communication parameters. It provides parameters to “fine tune” the receiver circuitry for optimal performance in various sea conditions, and for various gear types.

7 Navigation

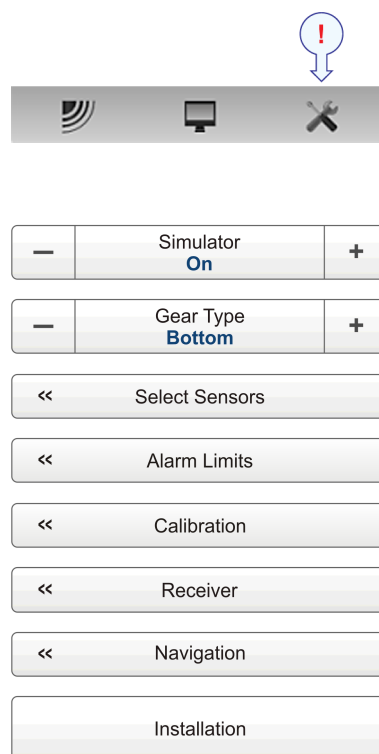
The **Navigation** dialog box controls how the PI50 receives information from external peripherals, such as navigation and gyro compass systems.

8 Installation

The **Installation** function opens a small submenu with access to the functions and dialog boxes required to set up the PI50 for operational use.

Tip

For detailed information about every function, button and dialog box, refer to the *PI50 Reference manual* or to the context sensitive on-line help.

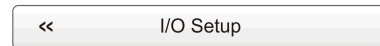


Installation menu

The following functions and dialog boxes are available from the submenu provided by the **Installation** button on the **Setup** menu.

1 I/O Setup

The **I/O Setup** dialog box allows you to control the properties of each of the available communication channels on the PI50 Processor Unit.



2 Software License

The purpose of the **Software License** dialog box is to allow you to enter a license code (text string) to unlock the PI50 functionality. In order to obtain the license code(s) required, contact your dealer.



Tip

For detailed information about every function, button and dialog box, refer to the *PI50 Reference manual* or to the context sensitive on-line help.

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