SIMRAD

IS35
Color Display
User Manual

ENGLISH

simrad-yachting.com

Preface

Navico is continuously improving this product, therefore we retain the right to make changes to the product at any time which may not be reflected in this version of the manual. Please contact your nearest Simrad dealer if you require any further assistance. It is the owner's sole responsibility to install and use the equipment in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing safe boating practices.

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Governing Language: This statement, any instruction manuals, user guides and other information relating to the product (Documentation) may be translated to, or has been translated from, another language (Translation). In the event of any conflict between any Translation of the Documentation, the English language version of the Documentation will be the official version of the Documentation.

This manual represents the product at the time of printing. Navico and its subsidiaries, branches and affiliates reserve the right to make changes to specifications without notice.

Copyright

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Warranty

The warranty card is supplied as a separate document. In case of any queries, refer to the brand website of your gauge or system.

Declaration of Conformity

This equipment is intended for use in international waters as coastal sea area administered by countries of the E.U. and E.E.A.

This gauge complies with the following regulations:

- CE under EMC directive 2004/108/EC
- Level 2 devices of the Radio communications (Electromagnetic Compatibility) standard 2008

The Declaration of conformity is available from www.simrad-yachting.com

Introduction

This manual is a reference guide for operating the Simrad IS35 Color Display.

Important text that requires special attention is emphasized as follows:

➔ ***Note:*** Used to draw attention to a comment or important information.

> ⚠ Warning: Used when it is necessary to warn personnel that they should proceed carefully to prevent risk of injury and/or damage to equipment/personnel.

Software

This manual is written for: Simrad IS35 Color Display software version 1.0

Please check www.simrad-yachting.com for details on release version.

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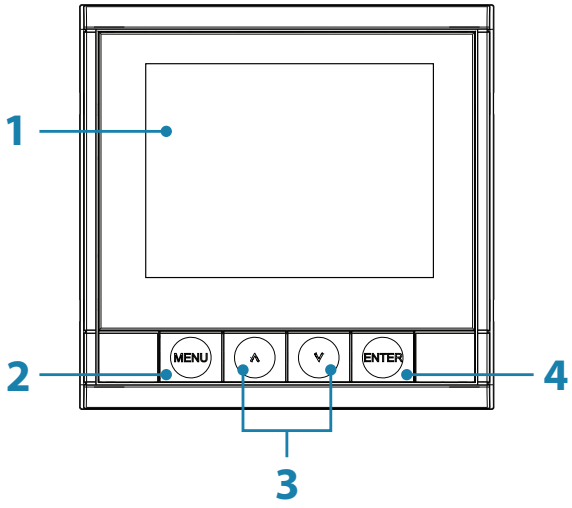
1 Simrad IS35 Color Display

The Simrad IS35 Color Display is a networked gauge which displays the vessel's engine data and fuel tank information. It can also display instrument data including speed, depth, heading, position, wind and environmental data measured by optional sensors and other equipment connected to the network.

Display and keys



1	**DISPLAY**		3.5" Color LCD 320 x 240 Resolution
2	**MENU key**	**Short press**	Page menu / Return to previous menu
		Long press	Shortcut to Standby and Display setup
3	**UP/DOWN key**		Scrolls up / down through menu / set values / active page transition
4	**ENTER key**	**Short press**	Enter sub menu / Confirm selection
		Long press	Shortcut to Enabled pages

Default display pages

When starting for the first time, the gauge is set with five default pages showing engine and system information. It is possible to add pages via the Pages menu and to change the template pages via the template page sub menu.

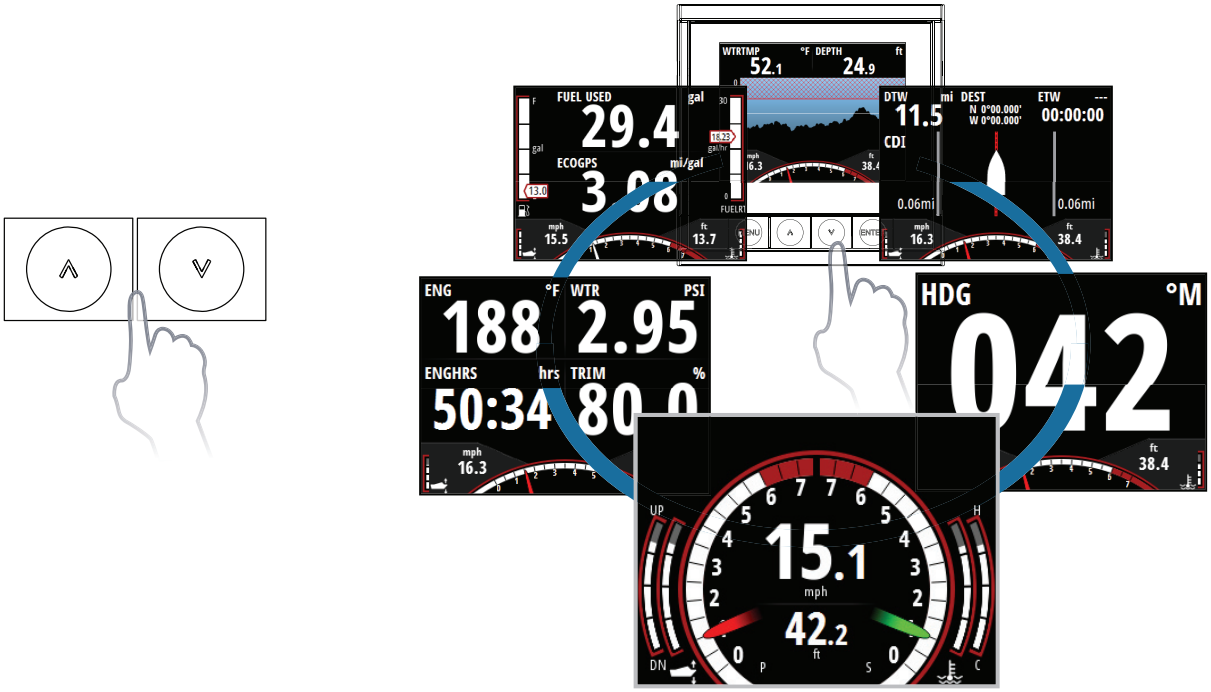
The information displayed on fixed data pages cannot be edited by the user. The type of information shown depends on what devices are connected on the network.

➔ ***Note:*** Data fields are prioritized automatically. Adding or removing devices from the network may change which data types are displayed on the gauge.

See the Pages section of this manual for more information on page setup and configuration.

Page transition

Use the **UP/DOWN** keys to scroll through the active pages.



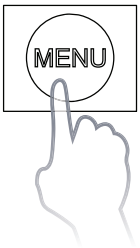
2 Operation

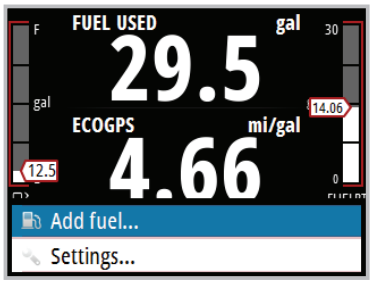
Menu operation

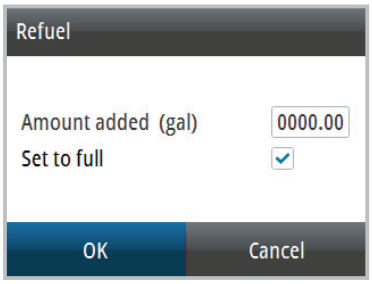
Page menu

The Page menu options vary from page to page.

Pressing the **MENU** key once on any page will show the available menu options.



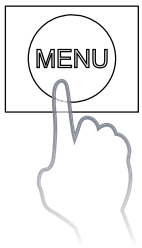


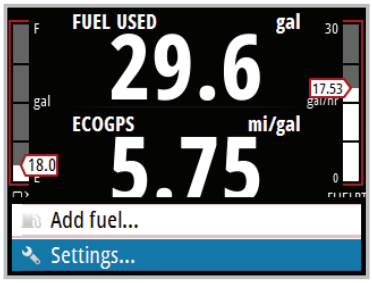


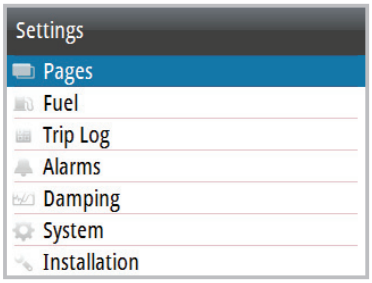
➔ ***Note:*** All page menus have a settings option. Any other option refers to the current page.

Settings

The Settings menu is where display options, display settings, system settings, source selection and calibration can be accessed.



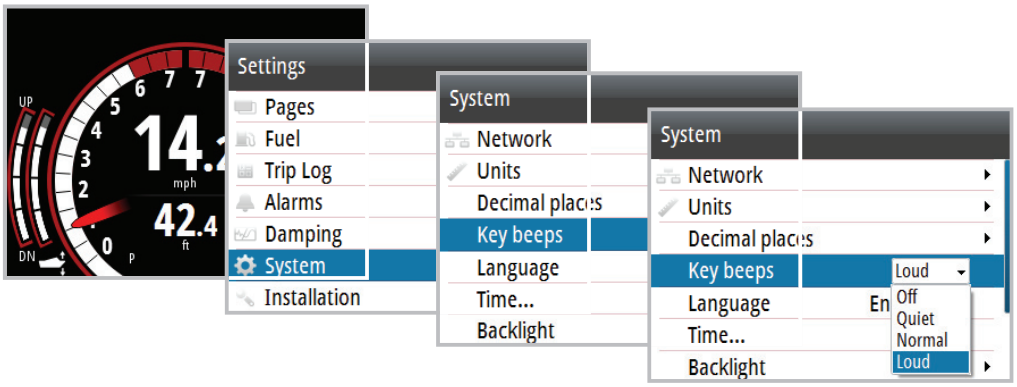




Example menu structure

1. Press the **MENU** key
2. Use the **UP/DOWN** and **ENTER** keys to select and navigate through the menu options

   Example: Access Key beeps dialog via the settings menu.

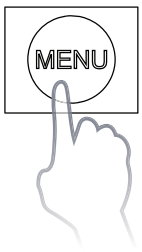


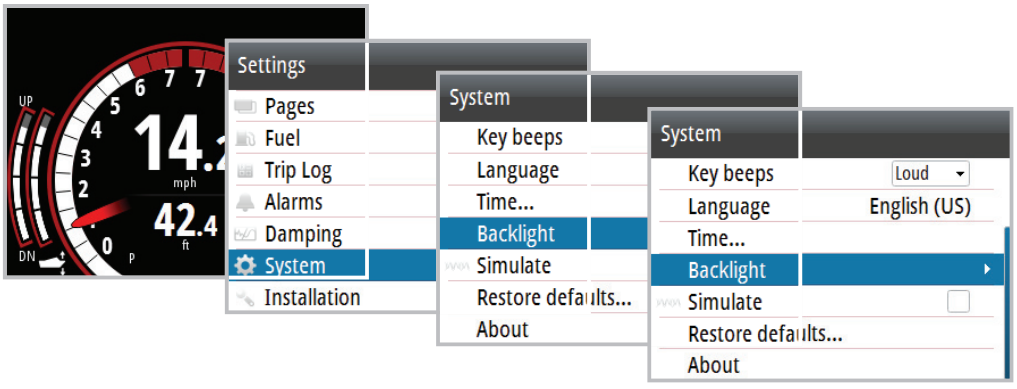
→ *Note:* Pressing the **MENU** key once returns you to the previous menu.

Backlight

There are two methods of adjusting the gauge backlight.

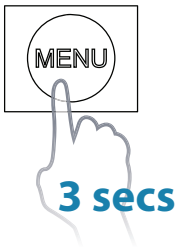
1. **Via the Menu**

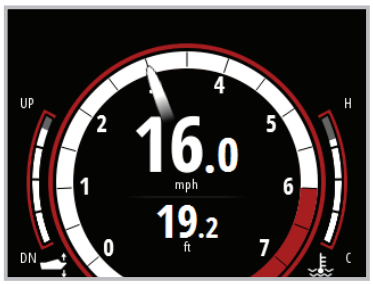


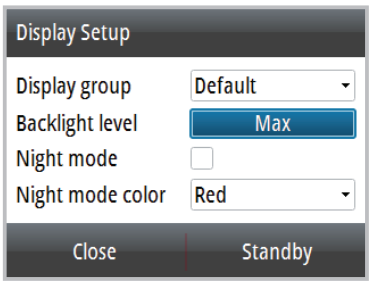


2. Via the Display setup shortcut

Press and hold the **MENU** key for three seconds to open the Display setup.







Display group

All units in the selected Display group will mirror each others light settings.

Level

Adjusts the backlight level from Min (10%) to Max (100%) in 10% increments.

Night mode

Changes the gauge to Night Mode color palette. All gauges in the selected Display group will also change to Night Mode.

➔ ***Note:*** Gauge night mode cannot be changed via a Multi-Function Display.

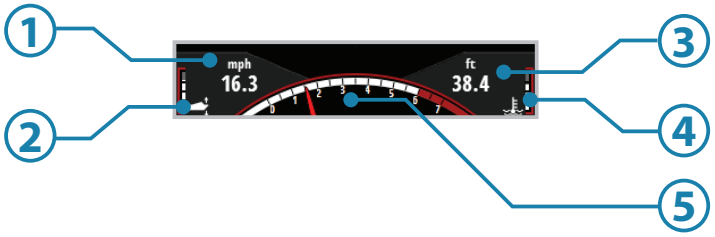
Night mode color

Changes the Night Mode color palette.

Pages

Static gauge

Some pages have a static gauge at the bottom of the display showing two pieces of dynamic data, engine trim, temperature and an RPM dial.



No.	Description	No.	Description
1	Dynamic data field	4	Engine temperature
2	Engine trim	5	RPM Dial
3	Dynamic data field		

➔ ***Note:*** Dynamic data fields on the gauge pages and the static gauge automatically populate and the data type shown depends on what devices are on the network.

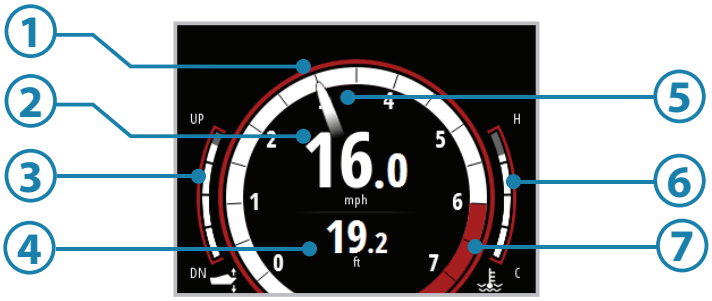
Static gauge dynamic data field priority order

1. Speed (Speed Over Ground preferred. Requires GPS, paddle wheel, Pitot)
2. Depth (Requires depth data on the network)
3. RPM
4. Fuel economy
5. Fuel flow

➔ ***Note:*** When data from two engines is displayed, only RPM, Engine trim and Engine temperature are shown.

Default fixed data pages

Motoring



No.	Description	No.	Description
1	RPM Dial	5	RPM Needle
2	Dynamic data field	6	Engine temp
3	Engine trim	7	RPM Limit
4	Dynamic data field		

Motoring dynamic data field priority order

1. Speed (Speed Over Ground preferred. Requires GPS, paddle wheel, Pitot) Depth (Requires depth data on the network)
2. Vessel fuel economy
3. Vessel fuel rate

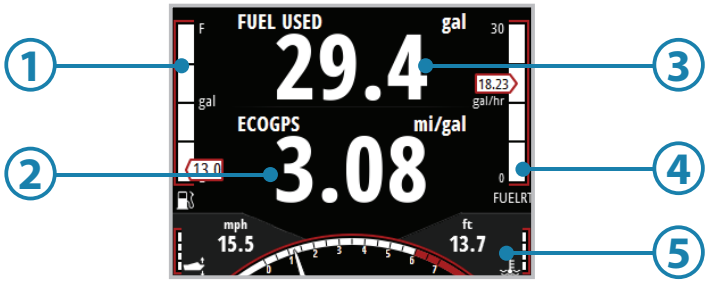
Engine

No.	Description	No.	Description
1-4	Dynamic data fields	5	Static gauge

Engine dynamic data field priority order

1. Alternator voltage
2. Engine temp
3. Engine water pressure (Requires a pressure sensor on the network)
4. Engine hours
5. Engine trim.

Fuel economy



No.	Description	No.	Description
1	Vessel fuel remaining	4	Fuel rate
2	Dynamic data field	5	Static gauge
3	Fuel used		

Fuel dynamic data field priority order

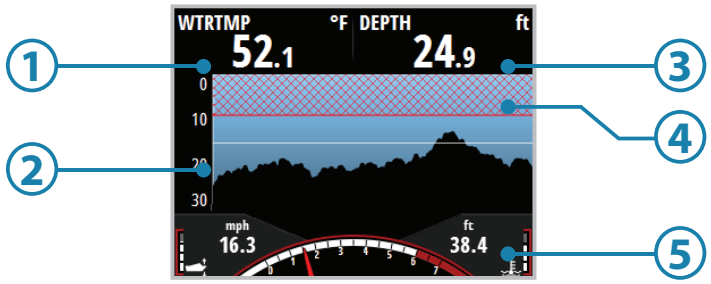
1. Vessel fuel economy (GPS)
2. Vessel fuel economy (water)
3. Vessel fuel (rate)

➔ ***Note:*** Vessel Fuel Remaining will only be shown when fuel flow data is available and a fuel storage device such as an EP-85R is on the network.

Additional fixed data pages

Depth history

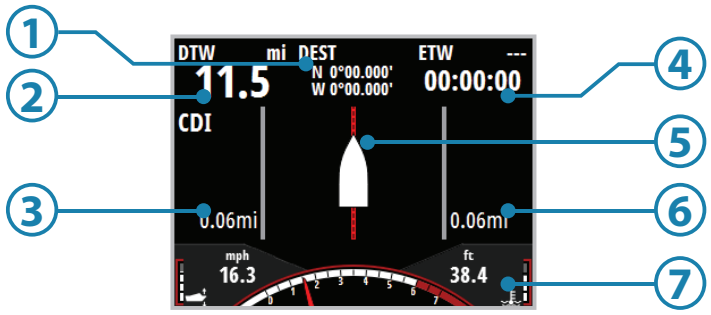
➔ ***Note:*** Requires depth data on the network



No.	Description	No.	Description
1	Water temperature	4	Depth alarm limits
2	Depth histogram	5	Static gauge
3	Dynamic data field		

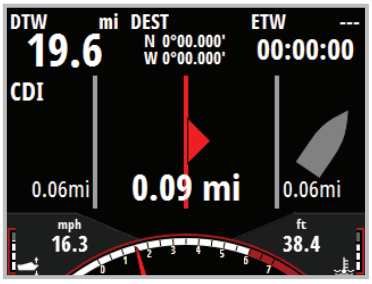
Motor steer

➔ ***Note:*** Requires a Chartplotter on the network.

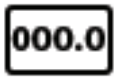
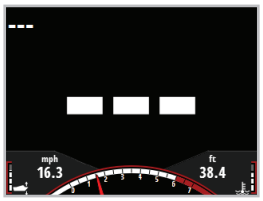
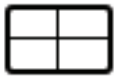
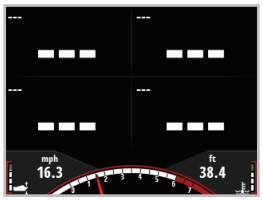
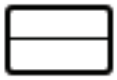
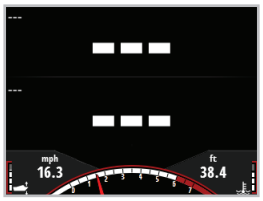
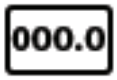
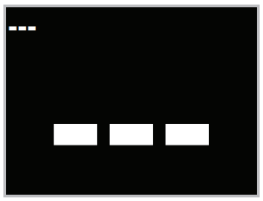
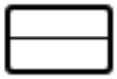
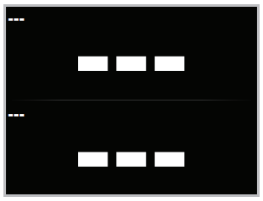
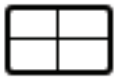
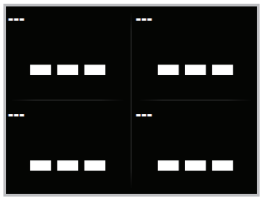


No.	Description	No.	Description
1	Waypoint position	5	Vessel indicator
2	Distance to waypoint	6	Cross track error limit
3	Cross track error limit	7	Static gauge
4	Estimated time to waypoint		

If the vessel moves out of the cross track error limit, the gauge will change to show the direction and distance that the vessel is off course.



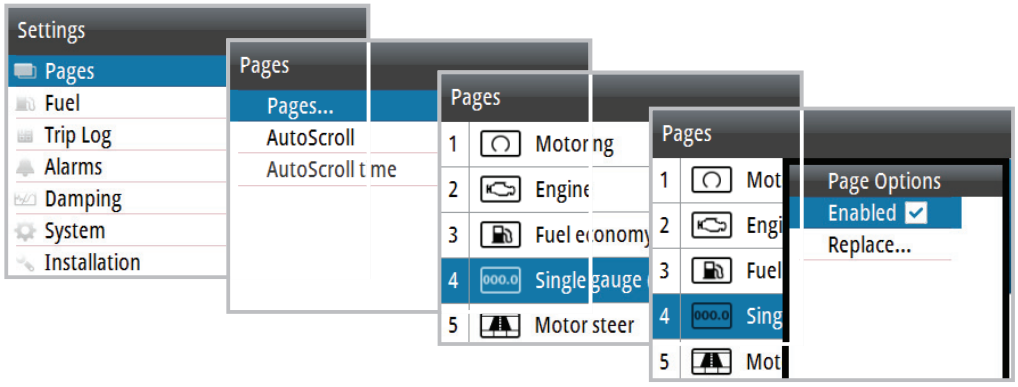
Template pages

Icon	Description	Page
	Single gauge (with RPM)	
	2x2 grid (with RPM)	
	2x1 grid (with RPM)	
	2x2 (bars) grid (with RPM)	
	Quad bars (with RPM)	
	Single gauge (full screen)	
	2x1 grid (full screen)	
	2x2 grid (full screen)	

Enabling / disabling a page

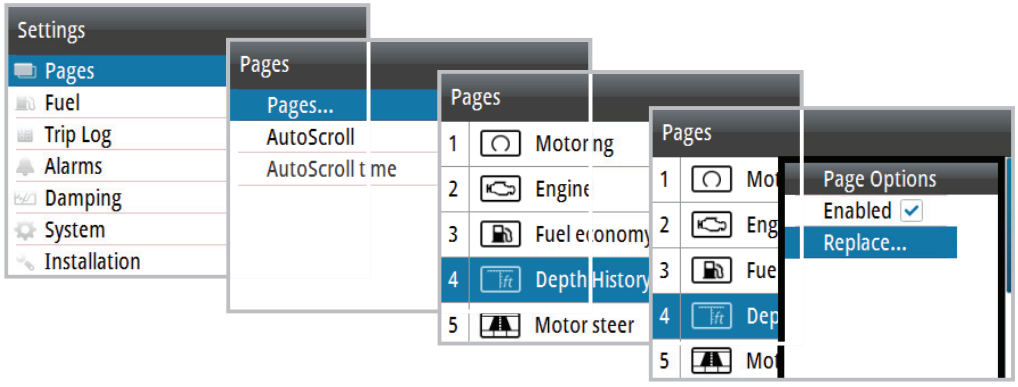
To Enable/Disable a page you need to first ensure it has been added to the pages list shown in Replacing/ Adding a page.

1. Press the **ENTER** key on the desired page to open the Enabled/Replace dialog
2. Press **ENTER** to toggle On/Off.

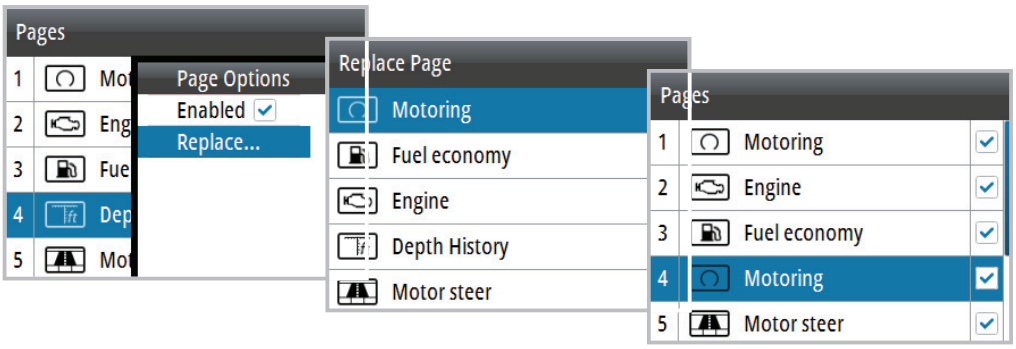


Replacing / adding a page

1. Select the page you want to add / replace
2. Press the **ENTER** key to open the Enabled/Replace dialog



3. Select the desired page from the Replace page list



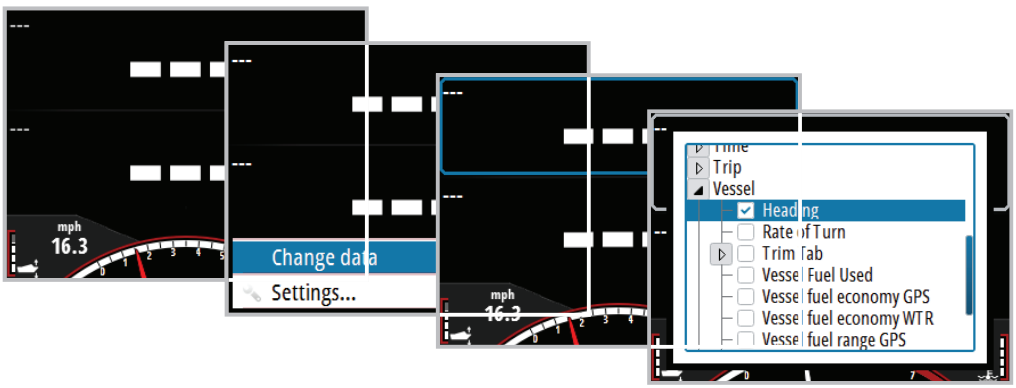
The selected page is shown in the active pages list.

Configuring page data

Once selected a template page can be configured to show any available system data.

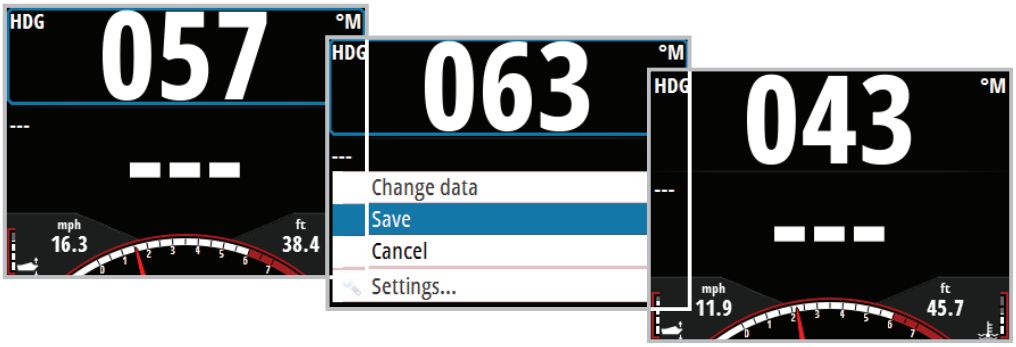
→ ***Note:*** A template page cannot be edited until it has been selected and enabled as one of the active display pages.

1. Select a page that can be changed. I.e. 2x1 grid
2. Press **MENU**
3. Select Change data
4. Select the desired field
5. Select the desired data type from the menu options.



Once selected, a tick appears in the check box and the gauge will revert to the page.

The desired data now appears in the selected field. Before opting to save you can populate other blank fields by repeating steps 4 and 5.

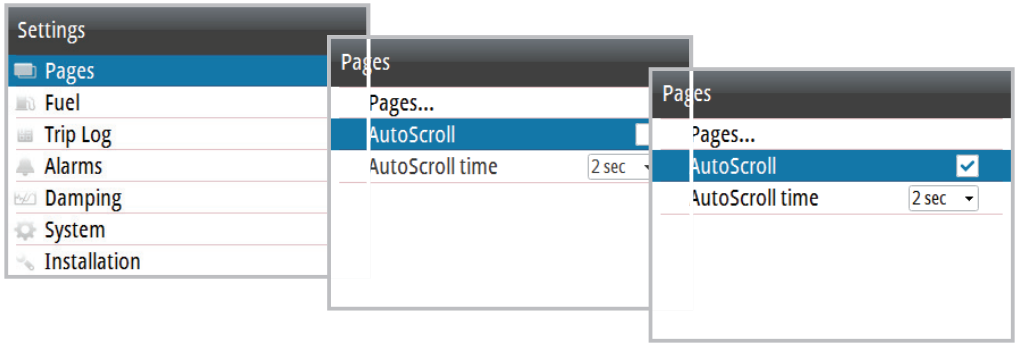


6. Press **MENU**
7. Select Save

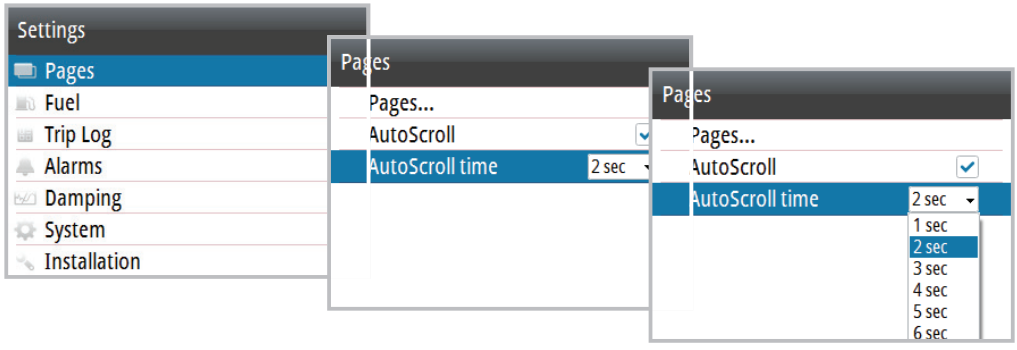
→ ***Note:*** If a data type is selected but there is no sensor information on the network, the gauge will show as ---.

AutoScroll

Select AutoScroll from the pages menu.

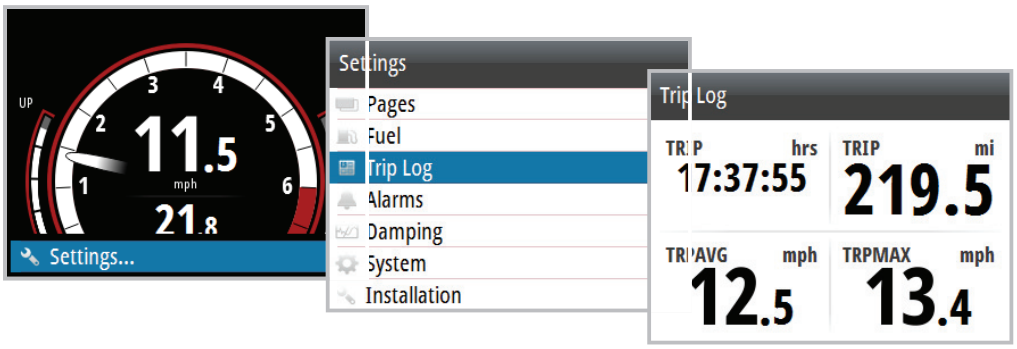


AutoScroll time can be set between 1 and 10 seconds.



Trip log

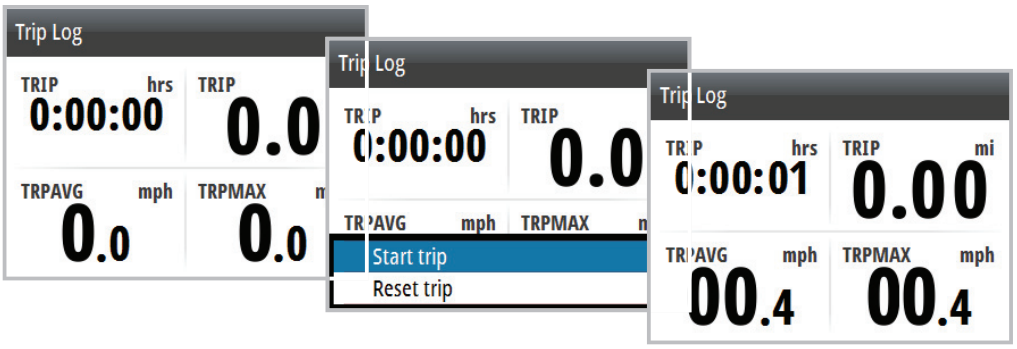
The Trip Log shows trip duration, distance, average speed and max speed from the time the Trip Log was started / reset.



➔ ***Note:*** Trip information is calculated using GPS or the paddlewheel if GPS is not present. No Trip Log information is recorded while the Trip Log is stopped.

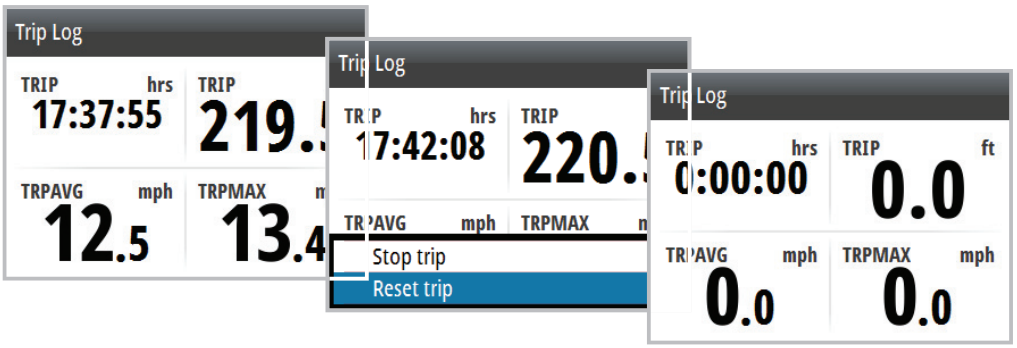
Start / Stop Trip Log

Starts / Stops the trip log recording



Reset Trip Log

Resets all trip log information to zero.



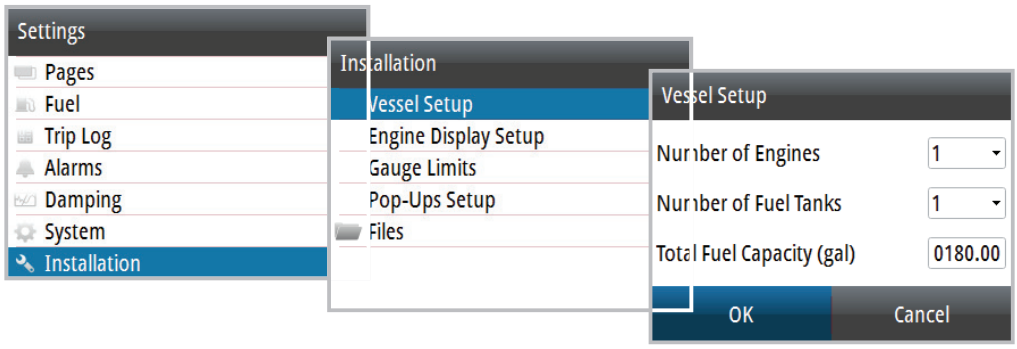
3 Refuelling

Adding fuel for the first time

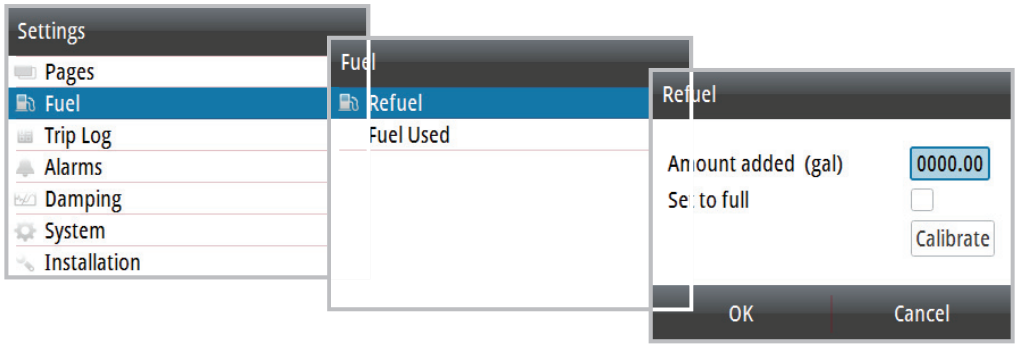
To accurately calculate fuel capacity, fill the tank and select **Set to full** in the Vessel refuel dialog. Estimating existing fuel level incorrectly could result in inaccurate fuel remaining and fuel range calculations.

1. Make sure the vessel setup is complete and the number of tanks and total fuel capacity is set to the correct value.

➔ ***Note:*** The number of tanks and fuel capacity can be updated using the vessel setup dialog in the installation menu, or by using the first-time start-up wizard.

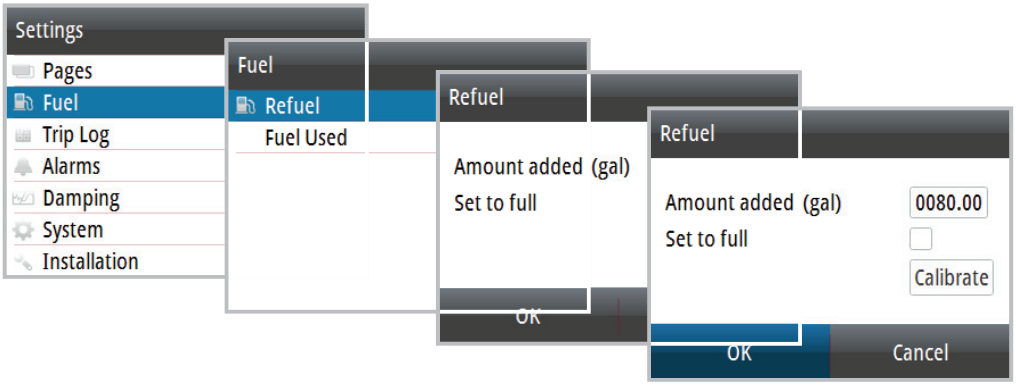


2. Go to the Refuel dialog via the Settings menu



Adding fuel

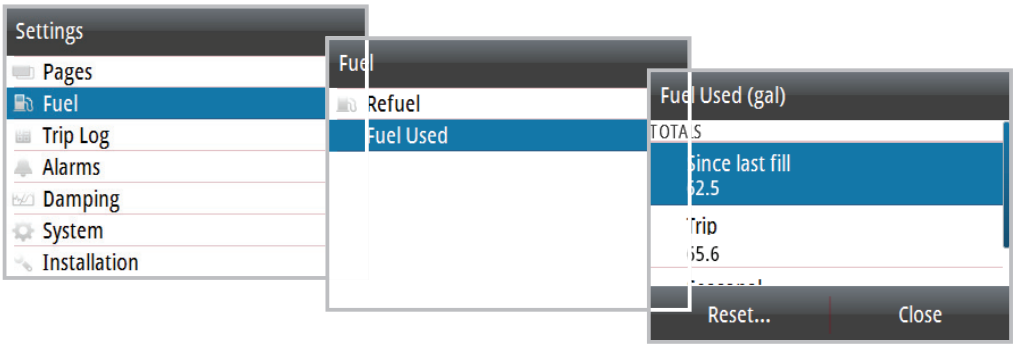
1. Make sure the vessel setup is complete and the number of tanks and total fuel capacity is set to the correct value.
2. Enter the amount of fuel added to the tank into the Amount added section, or select **Set to full** when filling the tank to its maximum capacity



Fuel used

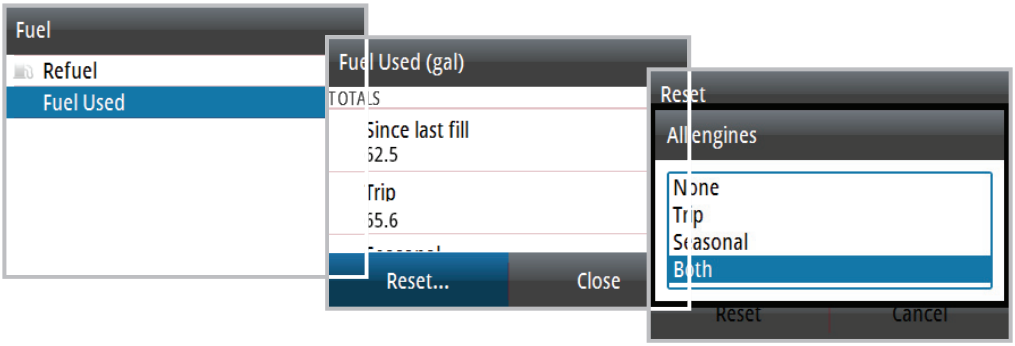
The fuel Used dialog shows how much fuel has been used since last fill, from trip reset and seasonal usage (continuous recording).

➔ ***Note:*** If more than one engine is on the network, then the Fuel Used data shown is the total for all engines. It also lists the data for each engine.



Fuel used reset

To access reset to zero options, select **Reset** at the bottom of the Fuel Used page. Then select the desired reset option from the list.



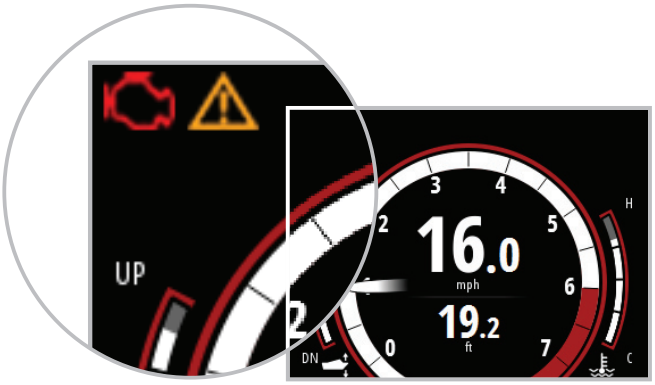
➔ ***Note:*** You can reset the total for one engine or all engines.

Reset option	Description
None	Returns to Fuel Used page
Trip	Reset Trip fuel used only
Seasonal	Reset Seasonal fuel used only
Both	Reset Trip and Seasonal fuel used

4 Settings

Engine alarms

For engine-specific alarms, an icon will appear on the display and remain on while that alarm instance is still valid.

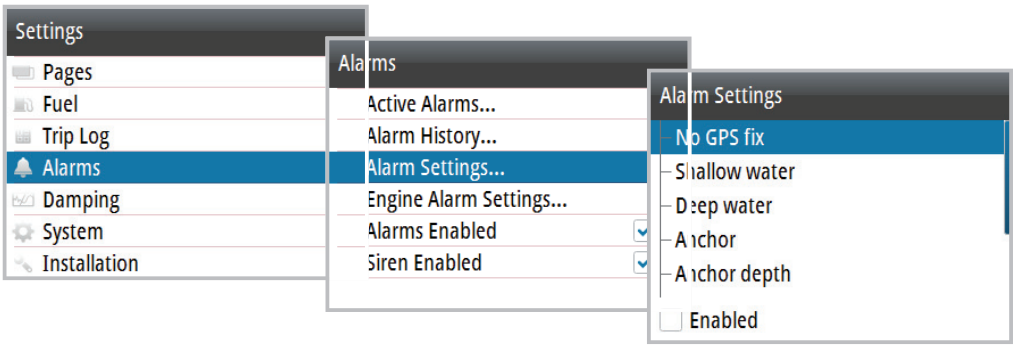


→ ***Note:*** For dual engines, the alarm icon appears on the side of the display that the engine is configured.

Icon	Alarm description
	Power / Charge indicator
	Check engine / General engine faults / Engine or its related system faults
	High engine temperature
	Warning - Engine malfunction - Check active alarms for available information
	Water in fuel

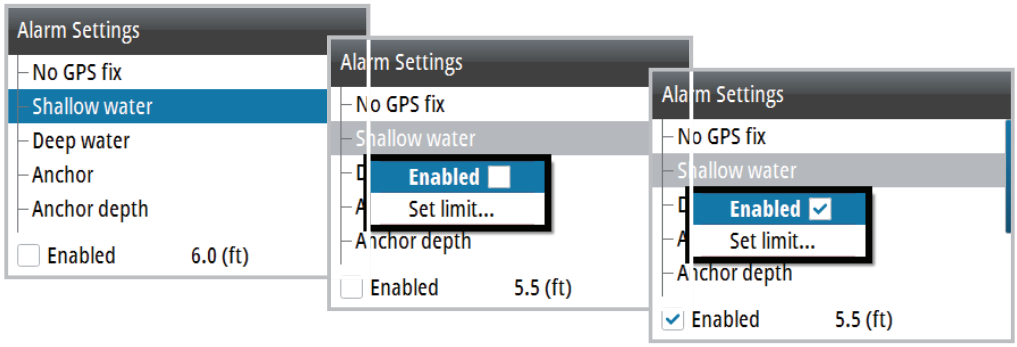
System alarms

If a sensor is connected to the network, you can enab;e alarms by selecting them from the list in the Alarm settings menu.



Enabling an alarm (alarm On/Off)

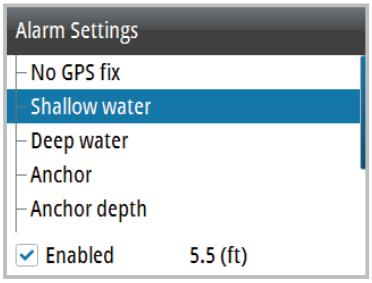
Turns an alarm on or off via the Alarm Settings menu.



Alarms setting status

When an alarm option is highlighted, the Enabled dialog at the bottom of the page will show the alarm settings status and alarm limit.

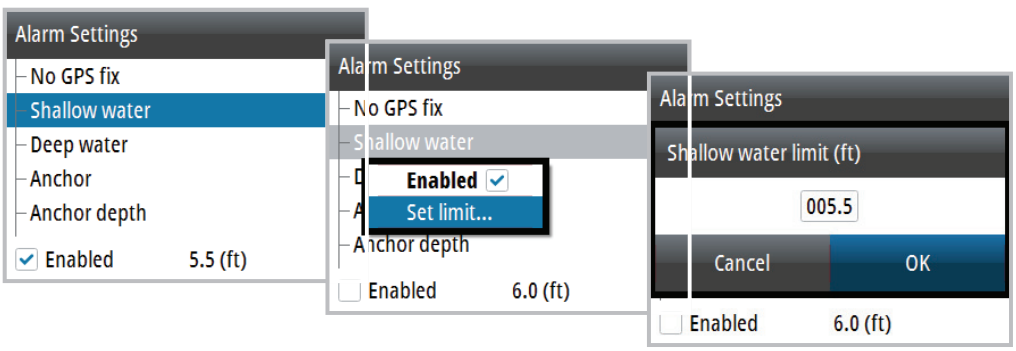
➔ ***Note:*** The relevant sensor must be on the network for the alarm to be enabled.



Check box	Description
☐ Enabled	Alarm disabled
☑ Enabled	Alarm enabled
■ Enabled	Alarm group (multiple alarms). At least one but not all alarms in the group are enabled
☐ Enabled	There is a sub menu with other alarm groups. Select the next level down in the menu to show the alarm status

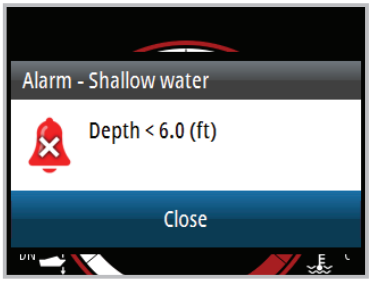
Alarm limits

Some alarms may feature an adjustable limit. Select the alarm and set the limit in the Alarm Settings menu.



Alarm indication

The alarm is triggered if any settings are exceeded. Alarms are indicated with an alarm text and an audible alarm (optional).

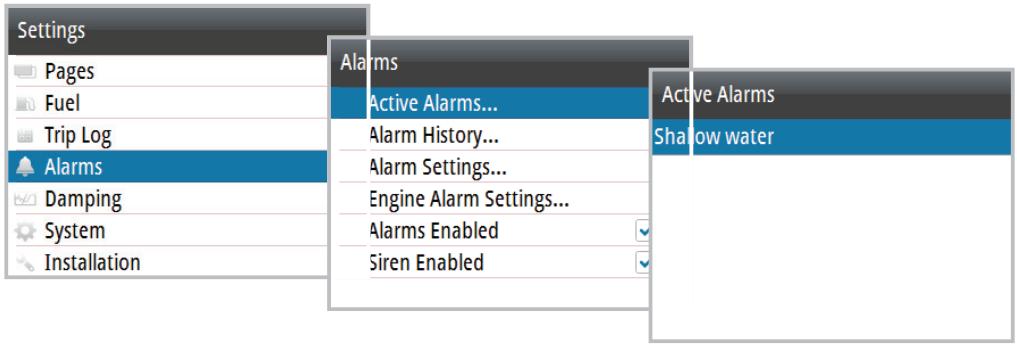


Acknowledging an alarm

An alarm is acknowledged by pressing the **ENTER** key. This removes the alarm notification and silences the alarm. In some cases the alarm icon remains on the gauge until the fault is resolved.

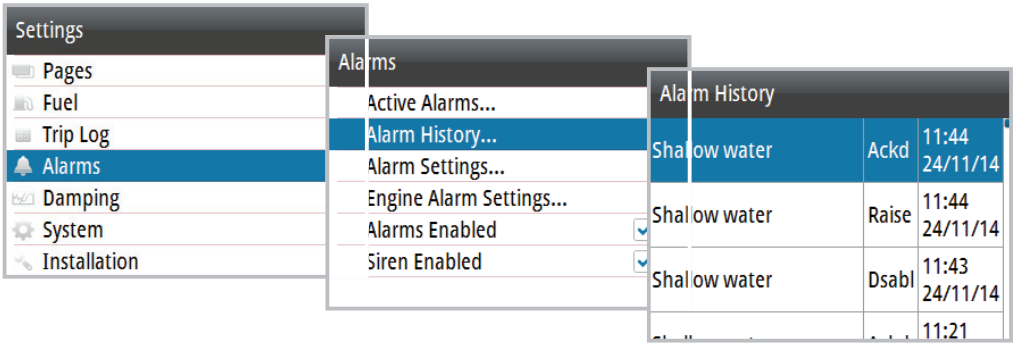
Active alarms

Lists active alarms on the network. These alarms will be present until the alarm instance is cleared.



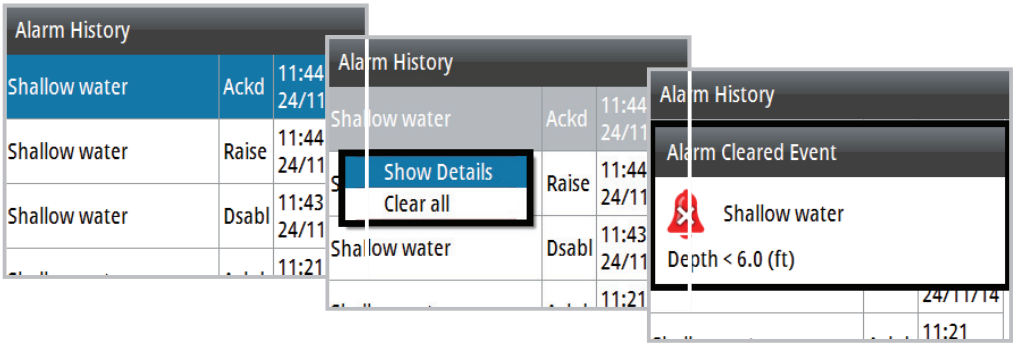
Alarm history

The alarm history can be accessed via the Alarm History menu. This stores alarm messages until they are manually cleared.



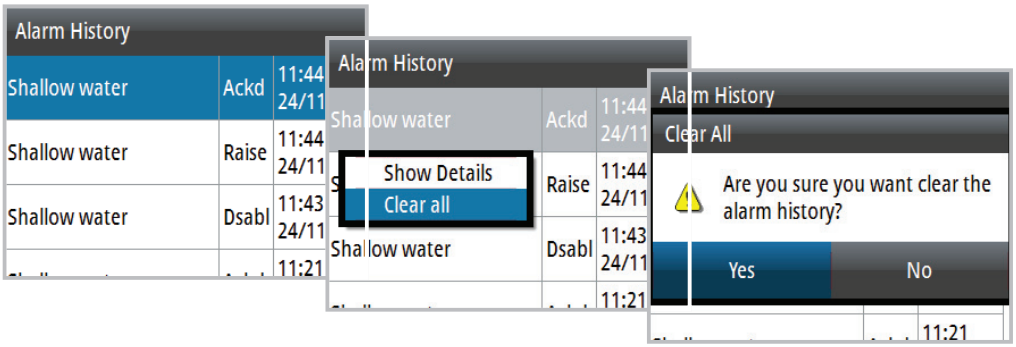
Alarm details

Select an alarm instance to show more details of that specific occurrence and the action taken.



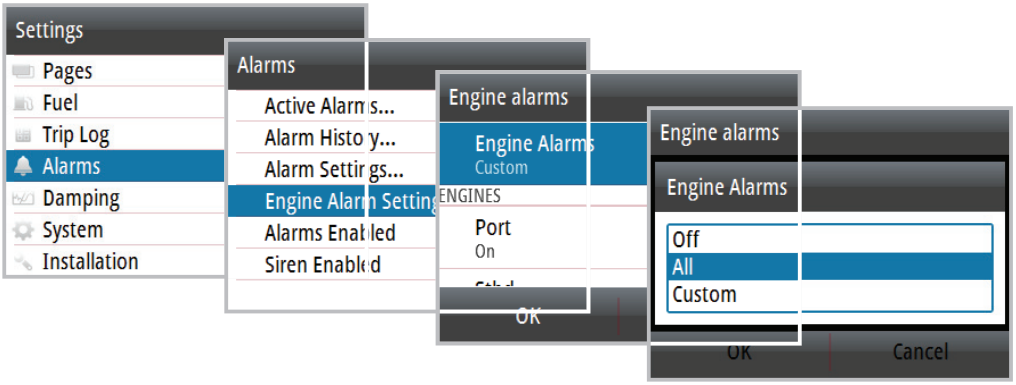
Clear Alarm History

1. Open Alarm History list
2. Press **ENTER**
3. Select Clear all



Engine alarm settings

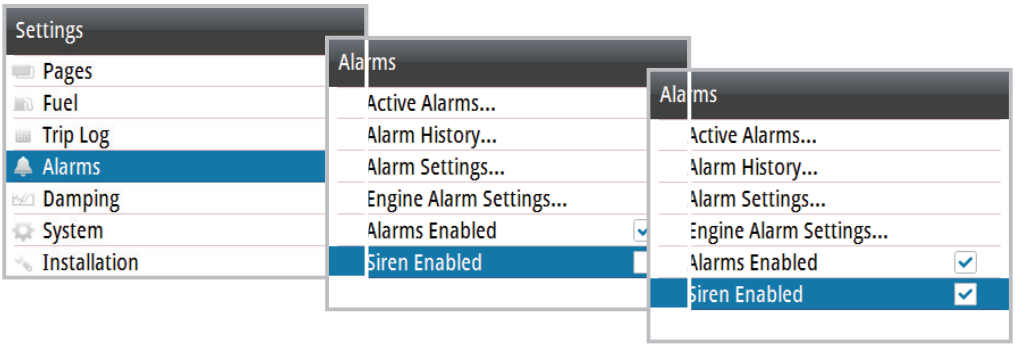
Set all Engine Alarms on or off. If multiple engines are in use, **Custom Setting** can be used to select which engines alarms are on or off.



Setting	Description
Off	All alarms for all engines are off
All	All alarms for all engine are on
Custom	Individually select which engines alarms will be all on or all off

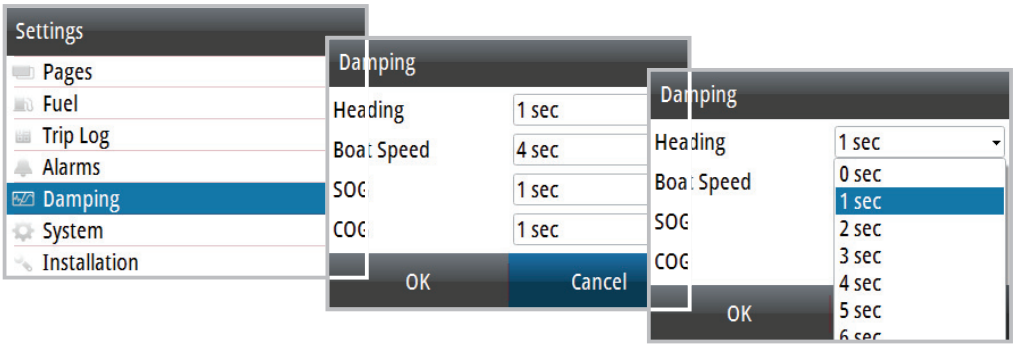
Alarm siren

When enabled, an audible alarm sounds when an instance is triggered.



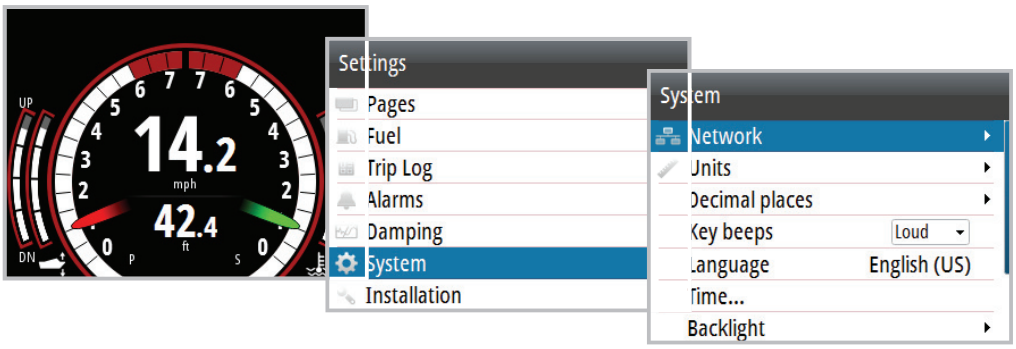
Damping

Damping rate affects how frequently the data is updated; the greater the damping value, the smoother the number change will be, but the change will also be slower..



System

From the System menu there are several display and system options available.



Network

Before the system can be used, the data sources need to be configured.

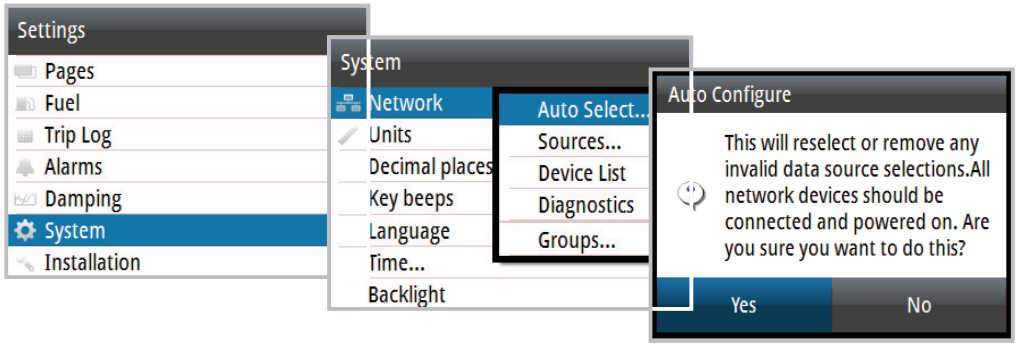
Sources

A data source can be a sensor or a device connected to the network that provide information and commands to other networked devices. The data sources are normally configured the first time the system is turned on. It should only be necessary to update this data if

a new source is added, data is missing or removed, a source has been enabled/disabled, a sensor replaced or after a network reset.

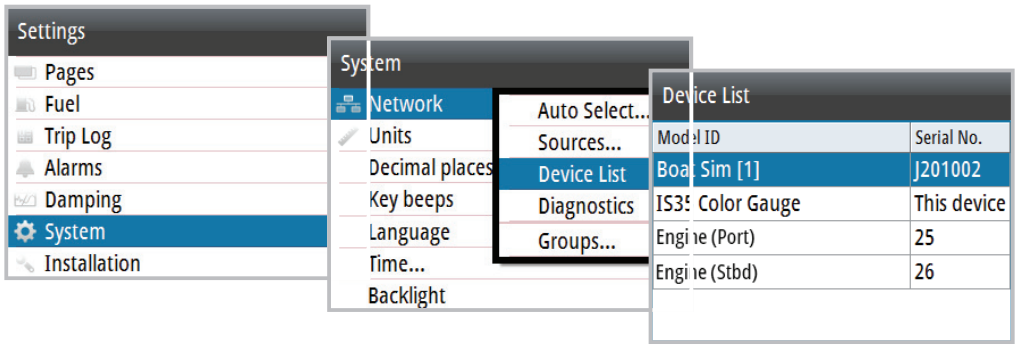
Auto Select

The Auto Select option looks for all sources connected to the network. If more than one source is available for each item, the gauge automatically selects from the internal device priority list.

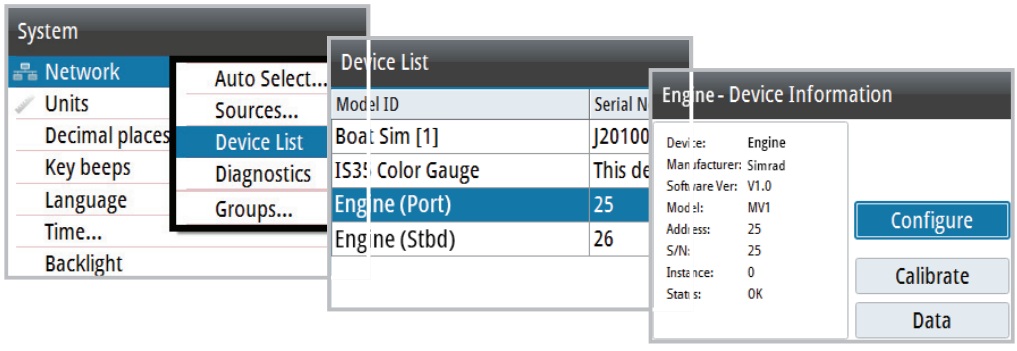


Device list

Shows a list of all devices connected to the Network.

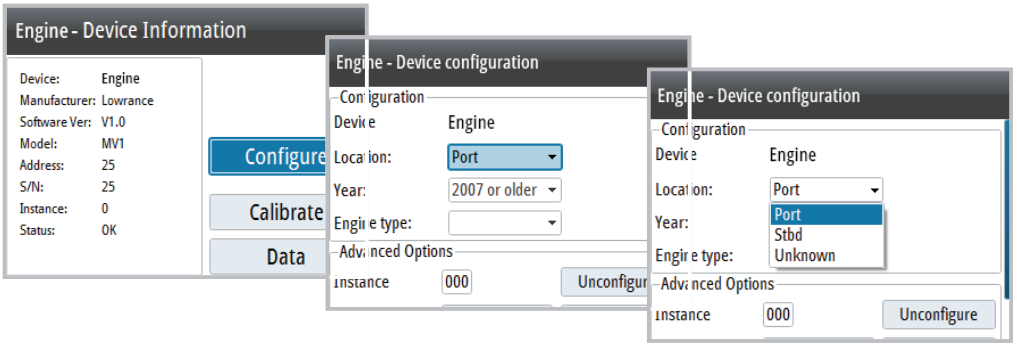


Selecting a device in this list brings up additional details and actions.



Configure

All units come pre-configured but they can be modified once connected to the network. The example below shows how to configure the engine location.



➔ ***Note:*** Configuring the engine location correctly is important when more than one engine is on the network.

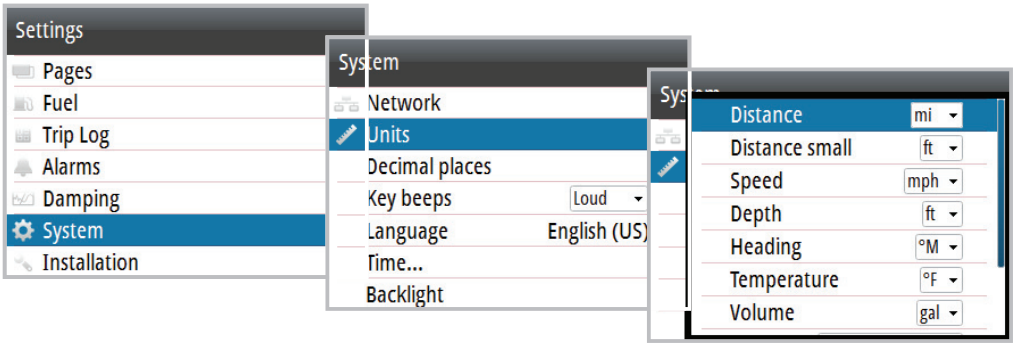
Some devices show additional options specific to the device. For example the **Calibrate** option, to allow easy setup of a device. Calibration options vary depending on the device.

Diagnostics

NMEA2000 Bus diagnostic data on the network.

Units

Set the unit of measurement for how you want the data to be displayed.



Decimal places

Set the number of decimal places for the boat speed and sea temperature display.

Language

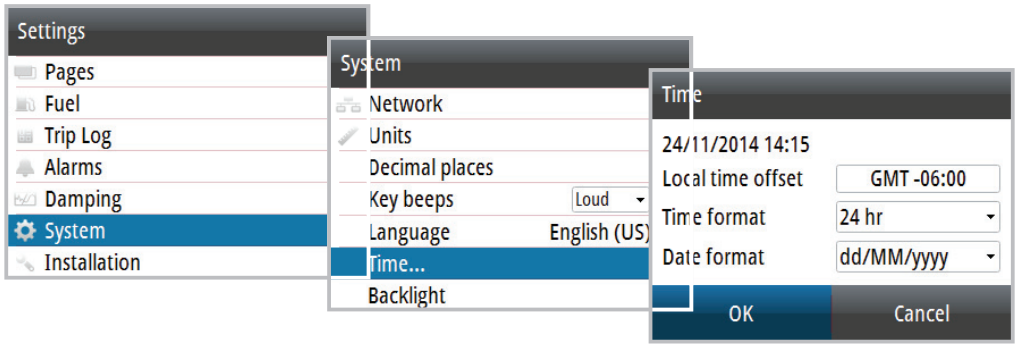
Set the preferred language for the gauge.

➔ ***Note:*** This is not a network function. You need to change all gauges separately.

➔ ***Note:*** The unit automatically restarts once the language is selected.

Time

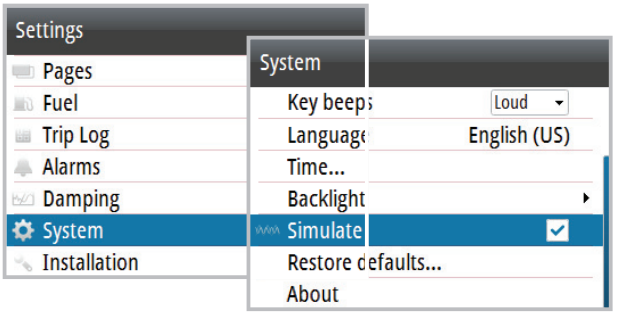
Set the preferred time / date format and the local time offset.

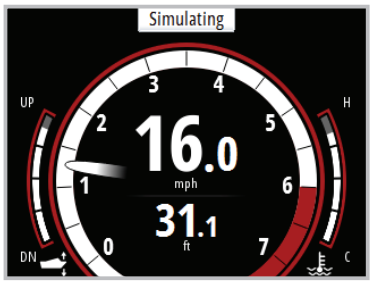


Simulate

Sends simulated data to the gauge.

➔ ***Note:*** All other gauges on the network continue to display the current boat data and do not change to simulate mode. A simulate warning box flashes on and off at the top of the display.

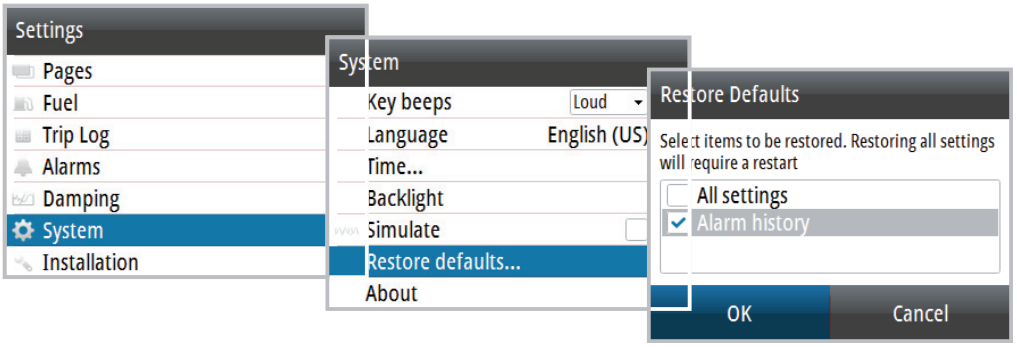


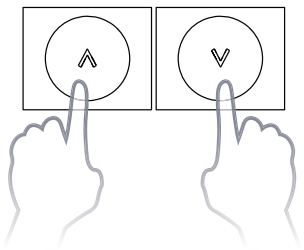


Restore defaults

Restore all system settings of the gauge to factory defaults.

➔ ***Note:*** This is not a network function. This only resets and deletes history on the individual gauges selected.



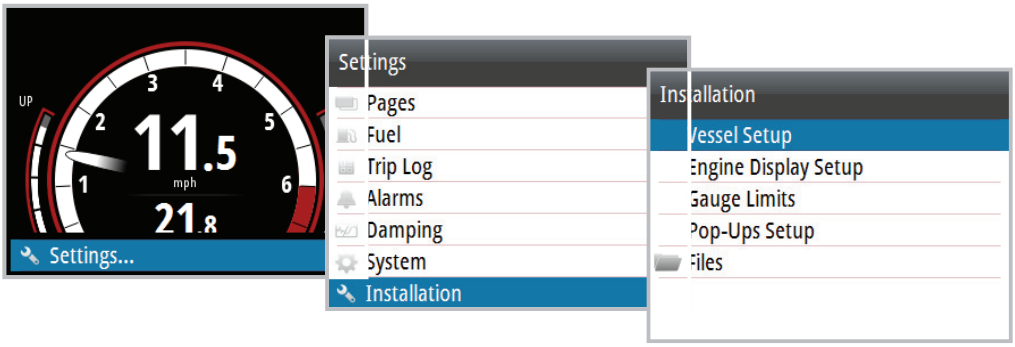


Forced factory reset

If the gauge does not respond to the normal restore procedures, press and hold the **UP** / **DOWN** keys while powering the unit on. A beep signifies the reset has been completed.

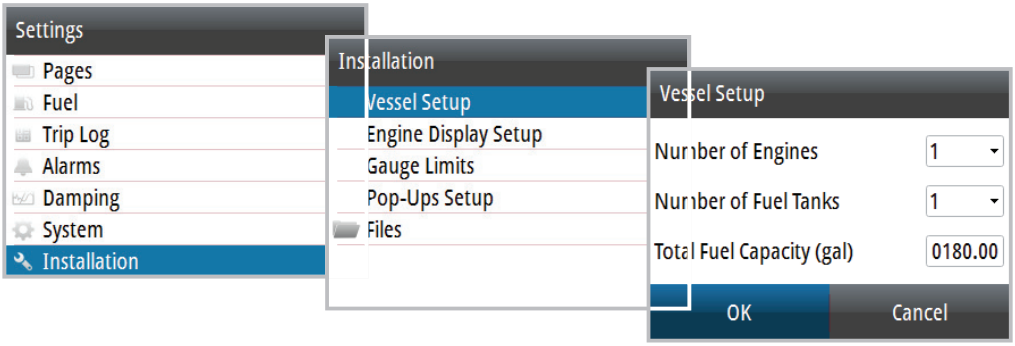
Installation

Via the Installation menu, access Vessel Setup, Engine Display Setup, Gauge limits and Pop-ups setup dialogs. Save and restore user data, upgrade the gauge and remote units software via the Files dialog.



Vessel setup

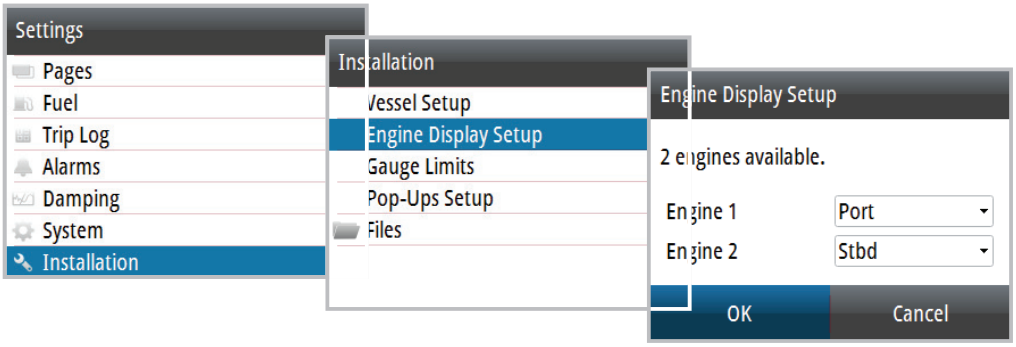
Set the number of engines, fuel tanks and total fuel capacity.

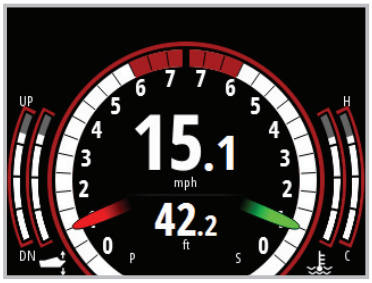


➔ ***Note:*** These settings are applied to all devices on the network.

Engine display setup

A maximum of two engine's data can be shown on each gauge. If the number of engines is set to two or more in the Vessel Setup, select which engine's data should be displayed via the Engine Display Setup.

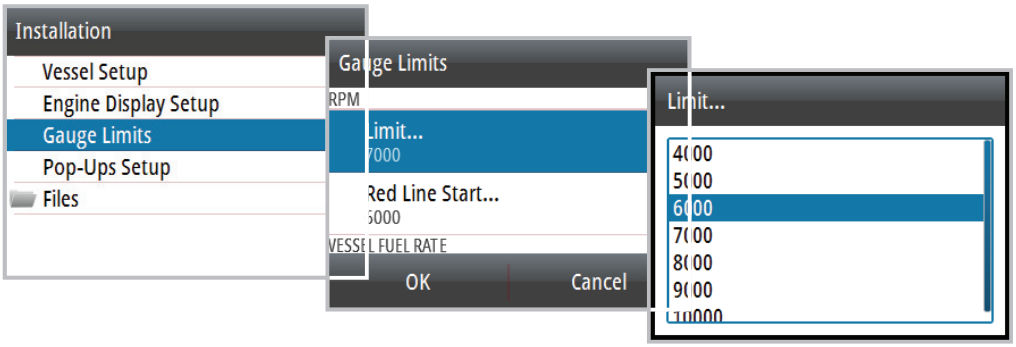




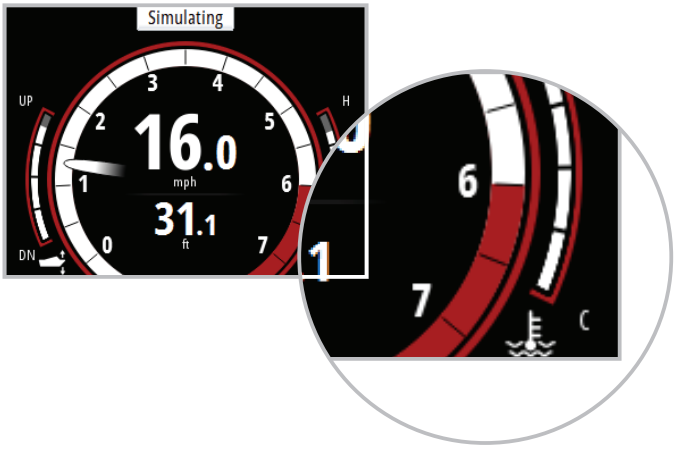
Gauge limits

Set the RPM and vessel fuel rate limits.

➔ ***Note:*** These limits are a visual guide on the display and do not set alarms.



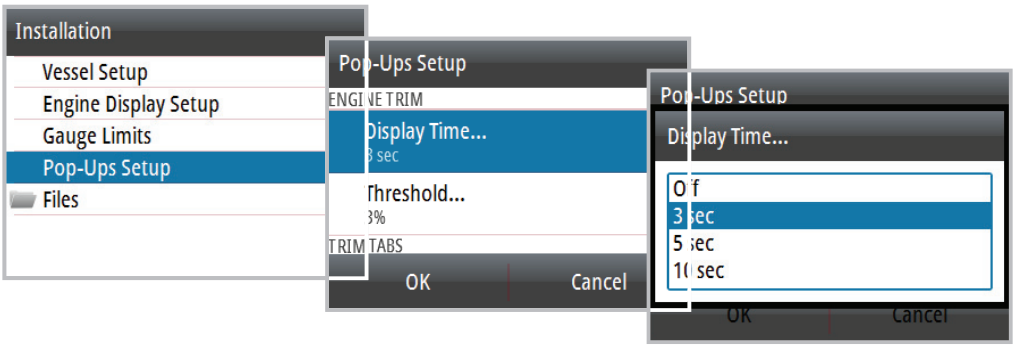
Example below shows rev limit start line set to 6000 RPM.



Pop-Up setup

Set the threshold and duration that pop-up information will be displayed when the engine trim, transmission and lever control is adjusted.

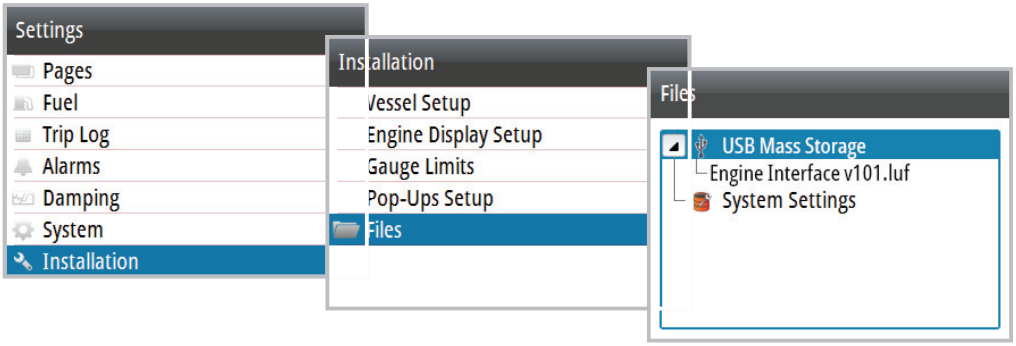
Pop-ups appear when the gauge sees a change in data that is greater than the set threshold.



Files

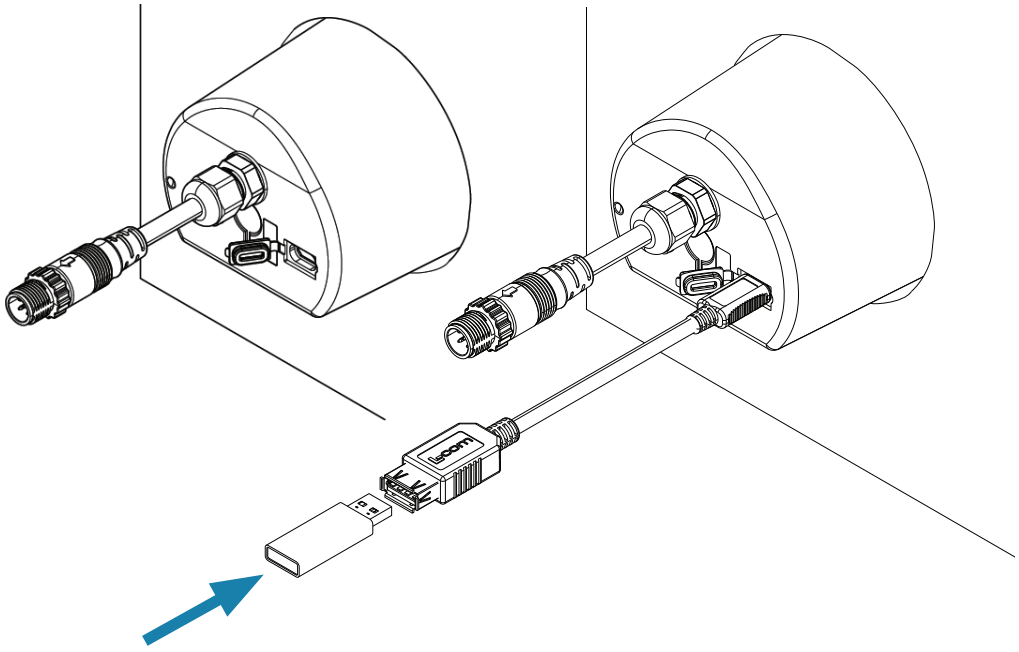
Access an attached USB device, import/export system settings, template page, vessel setup. Upgrade the software on the engine gauge and remote devices.

➔ ***Note:*** Each gauge on the network needs to be upgraded individually.



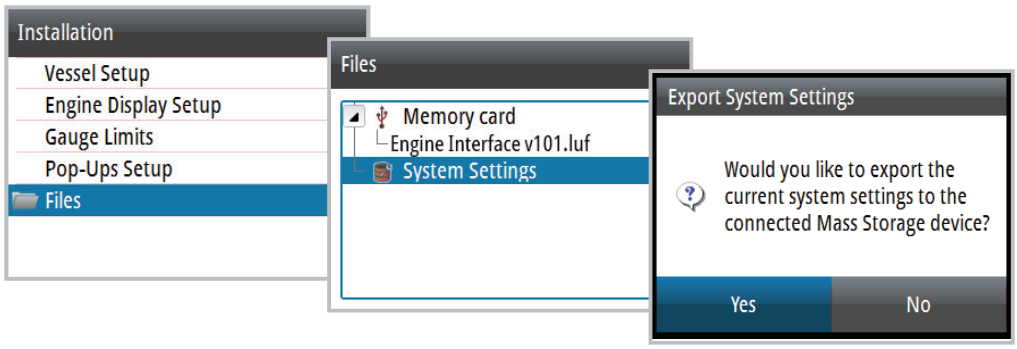
Connecting a Micro-USB device

1. Remove USB cover from the rear of the gauge
2. Insert a USB Micro USB adaptor and mass storage device



Export system settings

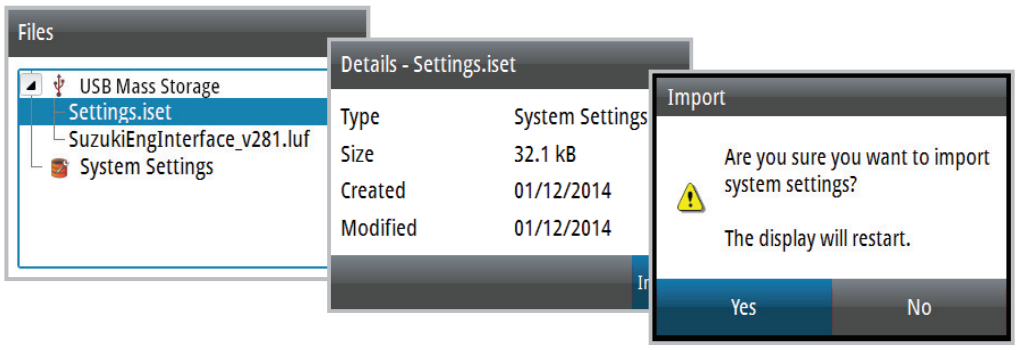
1. Insert a USB Micro USB adaptor and mass storage device
2. Go to the Files menu
3. Select System Settings
4. Press **ENTER** to export system settings to the USB mass storage device



Import system settings

1. Insert a USB Micro USB adaptor and mass storage device
2. Go to the Files menu
3. Select the Settings.iset file from the USB memory, the details dialog will appear. Press **ENTER** to confirm import

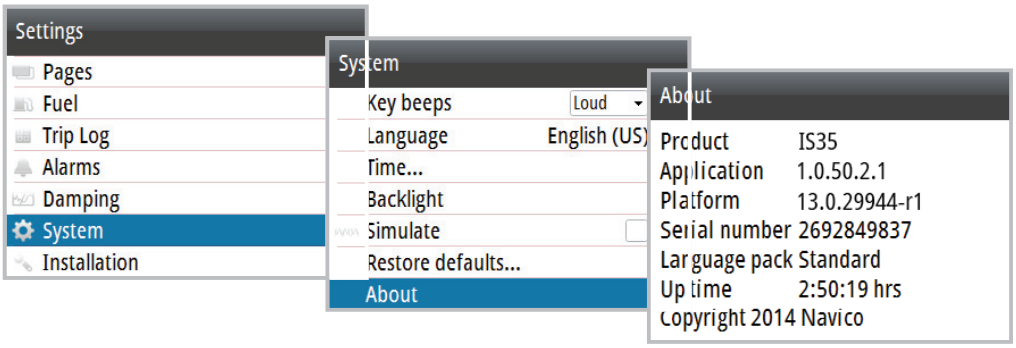
> ⚠ Warning: Importing system settings overwrites all existing system settings and restarts the gauge!



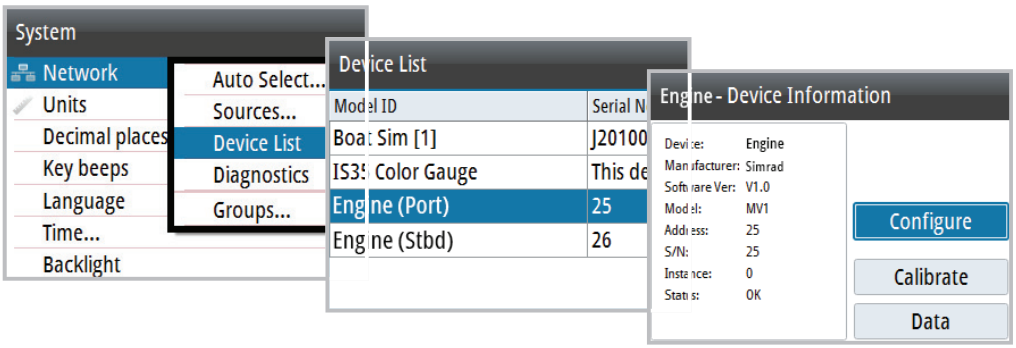
Software

About

Shows the device information and current software version installed on the gauge. Press the **MENU** key to exit.



To show the current version of software on a remote device go to the Device List and select the relevant device.

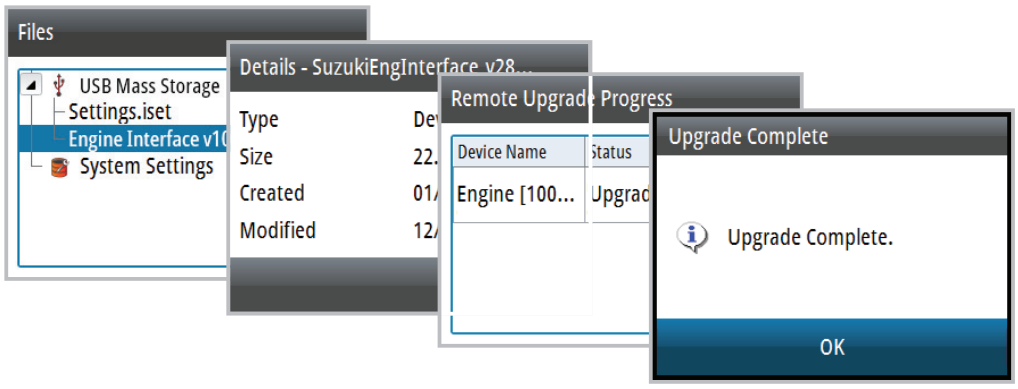


Remote device software upgrade

Update the software for NMEA 2000 sensors.

1. Verify software version via the Device List
2. Save the update file to a USB mass storage device
3. Connect portable storage device to micro USB slot
4. Select the update file from the USB memory
5. When the details dialog appears, press **ENTER**
6. Press **ENTER** again to confirm upgrade

7. The upgrade progress dialog will appear. Press **ENTER** once upgrade is complete



IS35 Color Display software upgrade

1. Verify software version via the About dialog
2. Save the latest .upd file to a USB mass storage device
3. Ensure the gauge power is off
4. Insert USB mass storage device via the USB adaptor
5. Turn the power on. The gauge will automatically begin the upgrade procedure
6. A message will appear on the gauge once the update is complete
7. Remove the USB device and replace the USB cover

> ⚠ Warning: Do not remove the USB storage device until prompted to do so once the update is complete. Removing the USB storage device before the update is complete may cause the gauge to become unresponsive or require repair!

5 Maintenance

If the gauge needs to be cleaned, use fresh water and a mild soap solution (not a detergent). Avoid using chemical cleaners and hydrocarbons, such as diesel, petrol etc.

Checking the keys

Make sure that none of the keys are stuck in the down position.

Checking the connector

The connector should be checked by visual inspection only. Ensure that the cable is connected correctly and the USB port cover is in place.

6 Specifications

Weight		0.28 kg (0.60 lbs)
Power consumption		130 mA at 13.5V LEN 3
Network load		Maximum 10 gauges
Color		Black
Display		
	Size	3.5" (Diagonal) 4:3 Aspect ratio
	Type	Transmissive TFT-LCD White LED back-light
	Resolution	320 x 240 pixels
	Illumination	White (day mode) Red / Green / Blue (night mode)
Environmental Protection		IPX7
Safe distance to compass		0.3 m (1.0 ft.)
Temperature		
	Operating	-15C to +55 ºC (+5 to +131 ºF)
	Storage	-25 to +65 ºC (-13 to +149 ºF)

988-10712-001

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