VDO

AcquaLink - 7” TFT display

Instruction manual

v. 1.0

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Updated and multilingual instructions available

These instructions are always updated and available in several languages at www.vdo-marine.com.

Accompanying documentation

The instructions for installing and using Nav Box and Nav Control are available at www.vdo-marine.com, document codes:

- Nav Box: A2C12119500
- Nav Control: A2C99832800

Customer service and warranty

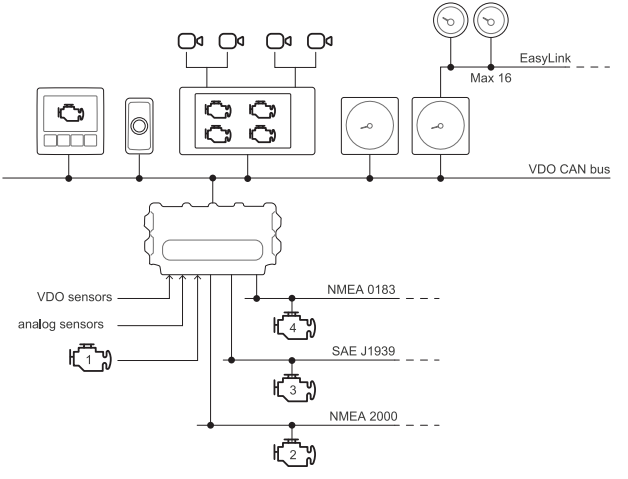
In the event of malfunction, fault or for information on the warranty, contact a VDO partner. To find a partner, visit www.vdo-partner.com.

Getting started

Description

AcquaLink 7" is a multifunctional display connected to the VDO CAN bus network of the AcquaLink system. The display lets you view data from the engines and the sensors connected to Nav Box through NMEA 2000, NMEA 0183, SAE J1939 or directly connected through analog inputs. Up to four engines can be monitored from the display.

The Nav Control remote control is necessary to interact with the display.



Operations

AcquaLink 7" is a versatile device. It lets you control all the engines connected to Nav Box in a single monitoring point and at the same time.

Select the number of engines on the boat when first turned on or when reset. If the selected number of engines is different from the installed engines, only the data of the selected engines will be displayed. The number of engines can be changed later (see "Change the number of engines to be displayed" on page 17).

Received signal priority

If the same data is transmitted by more than one signal for the same engine, the received signal priority is the following:

1. Analog input
2. NMEA 2000
3. SAE J1939
4. NMEA 0183

On/Off

The on/off mode depends on the connection made during installation.

The VDO logo and software version followed by the AcquaLink logo appear when turned on. In addition, if before turned off the display was controlled by Nav Control or if on the VDO CAN bus network there is only one display, the Nav Control icon appears.

The display prompts you to select the type of boat and the number of engines to be monitored when first turned on or when reset.

Function of the display buttons

Button	Function
	Briefly press: • Access favorite groups 1, 2 and 3.

Function of the Nav Control buttons

Button	Function
	Hold down: • Turn on/off Nav Control and all the devices connected to the VDO CAN bus network
	Briefly press: • Change the display brightness level Hold down: • Change the color of the background and of the characters on the display
	Briefly press: • Return to the previous menu level Hold down: • Return to the last data page displayed
	Briefly press: • Access the display main menu
	By briefly pressing and only when data pages are displayed: • Change the favorite group to be displayed
	By briefly pressing and only if there are several displays on the network: • Change the display to be controlled

Button	Function
	By pressing both buttons: • Lock/unlock Nav Control
Knob	By rotating the knob: • Scroll the menu items and display pages Briefly press: • Open a sub-menu • Confirm the selection

Configure the display

Following are the steps for initial configuration:

1. When turned on, indicate the type of boat and number of engines.
2. Set up general device operations (see "General settings" on page 18 and "System settings" on page 20).
3. Configure the sensors connected to Nav Box (see "Sensor configuration" on page 29).
4. Change/remove data pages selecting the best layout and data to be viewed (see "Data page configuration" on page 12).
5. Enable/disable the alarms on the VDO CAN bus, NMEA 2000 and SAE J1939 networks (see "Alarm management" on page 24).

Data pages

What are data pages

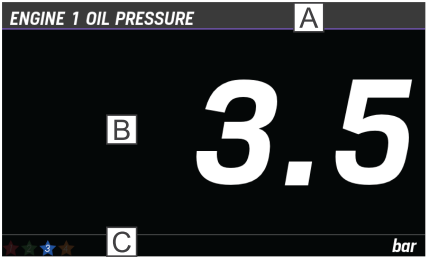
Data pages display data received from the various sources. The pages are grouped into four favorites groups, which can contain up to eleven pages each. Groups configuration is free, and a page can be inserted into more than one group. In addition, the **ALL VALUES** group contains all the available data pages, which vary according to the number of engines connected to Nav Box.

The default setting displays the four favorite groups with eleven pages each and the **ALL VALUES** group.

Possible operations

To scroll the pages, rotate the Nav Control knob or scroll your finger horizontally across the screen. To change the favorite group, press on Nav Control or scroll your finger up and down on the screen. To add/delete/edit pages, see "Data page configuration" on page 12.

Shared features



Part	Description
A	ID of the monitored engine and parameter name
B	Data page content
C	Status bar with favorite group and unit of measure

Managed data

Information	Unit of measure
Engine rpm	rpm
Engine boost pressure	bar, psi, kPa
Engine coolant temp	°C, °F
Engine coolant pressure	bar, psi, kPa
Engine oil temp	°C, °F
Engine oil pressure	bar, psi, kPa
Engine exhaust temp	°C, °F
Engine hours	h
Engine trim	%
Gear oil temp	°C, °F
Gear oil pressure	bar, psi, kPa
Fuel	%
True heading	°
Course over ground	°
App wind speed (AWS)	m/s, km/h, kn, bft
App wind angle (AWA)	°
True wind speed (TWS)	m/s, km/h, kn, bft
True wind angle (TWA)	°
True wind direction (TWD)	°
Depth below transducer	m, ft, fath

Information	Unit of measure
Depth below keel	m, ft, fath
Depth below waterline	m, ft, fath
Tilt (Roll/Pitch)	°
Speed over ground (SOG)	km/h, mph, kn
Sumlog (STW)	km/h, mph, kn
Avg speed through water	km/h, mph, kn
Velocity made good	km/h, mph, kn
Distance through water	km, mi, nm
Trip through water	km, mi, nm
Time	h:m:s
Race timer	h:m:s
Coordinates	Degrees Minutes (DM)
Battery voltage	V
Battery current	A
Rudder angle	°
Fresh water level	%
Waste water level	%
Sea water temp	°C, °F
Ambient temp	°C, °F
Barometer	hPa, mmHg, inHg
True set angle	°

Information	Unit of measure
Drift speed	km/h, mph, kn
X-track error (cross track error)	km, mi, nm
Distance to waypoint	km, mi, nm
Bearing to waypoint	°
Velocity to waypoint	km/h, mph, kn

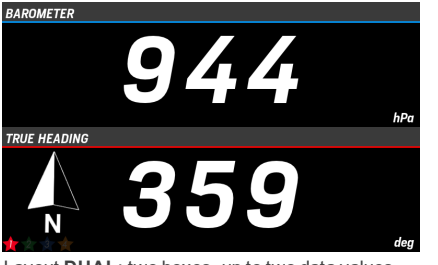
Data page configuration

Configuration via layout

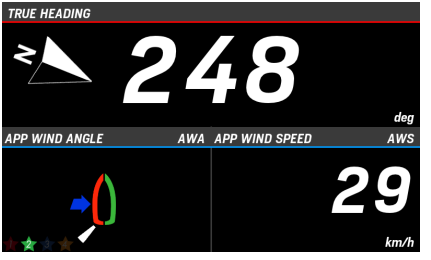
Each display page can be customized using five editable layouts and three default layouts.

Layout description

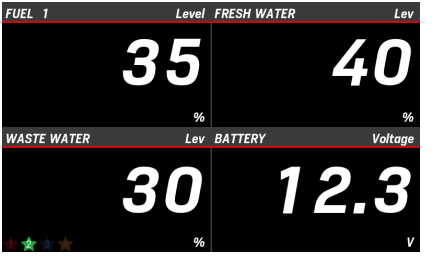
Layout **SINGLE**: single box. The data value is numeric or displayed by a gauge.



Layout **DUAL**: two boxes, up to two data values. The data values are numeric or displayed by a gauge.

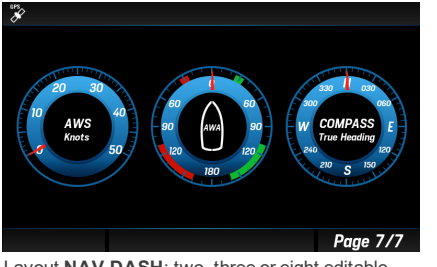


Layout **TRIPLE**: three boxes, up to three data values. The data values are numeric or displayed by a gauge.

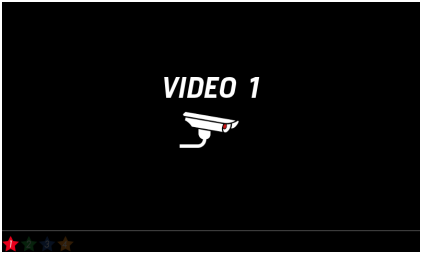


Layout **QUAD**: four boxes, from up to four data values. The data values are numeric or displayed by a gauge.

Layout **RADIO**: MediaBox page. See "MediaBox use" on page 41.



Layout **NAV DASH**: two, three or eight editable analog gauge layout (see "Viewable data in Nav Dash layout" on page 15)



Layout **VIDEO**: video input display.

Layout **MAST**: four pages with data about: **Apparent wind angle (AWA)**, **Apparent wind speed (AWS)**,**Speed through water (STW)**, **True heading**.

Viewable data in Nav Dash layout

Gauges	Viewable data
Nav Dash 1 **Nav Dash 2** **Nav Dash 3** (large)	• Engine revolutions • Depth below transducer • Rudder angle • Apparent wind angle (AWA) • Apparent wind speed (AWS) • True wind angle • True wind speed • True heading • Speed through water (STW) • Speed over ground (SOG)
Nav Dash 3 (small)	• Engine revolutions • Fuel level • Fresh water level • Waste water level • Trim • Rudder angle • Battery voltage

Edit a page (box layout)

Following is an example of how to edit a page with a **SINGLE** layout by applying a **DUAL** layout:

1. Press ⚙ to access the main menu and then scroll and select **FAVORITES**.
2. Scroll and select the favorite group where the page to be changed is located.
3. Scroll the pages until the desired page is displayed and select it.
4. Scroll and select the page layout **DUAL**: the page opens with the first box green.
5. Select the first box: the box turns red.
6. Scroll and select the data to be viewed: the box turns green.
7. Scroll and select the second box and repeat step 6.
8. Hold down ⌂ to save settings and return to the data page.

Edit a page (analog gauges layout)

Following is an example of how to edit a page with a **SINGLE** by applying a three gauge **NAV DASH** layout:

1. Press ⚙ to access the main menu and then scroll and select **FAVORITES**.
2. Scroll and select the favorite group where the page to be changed is located.
3. Scroll the pages until the desired page is displayed and select it.
4. Scroll and select the page layout **NAV DASH**.
5. Scroll and select the page layout **Nav Dash 2**: the layout opens and the center of the first gauge is green.
6. Select the gauge: the center turns red.
7. Scroll and select the selected data: the gauge center turns green.
8. Scroll and select the next gauge and repeat step 7.
9. Scroll and select the last gauge and repeat step 7.
10. Hold down ⌂ to save settings and return to the data page.

Delete a page

1. Press ⚙ to access the main menu and then scroll and select **FAVORITES**.
2. Scroll and select the favorite group where the page to be deleted is located.
3. Scroll until you see the desired page and select it.
4. Scroll and select the page layout **REMOVE**: the message **NO SCREEN** is displayed.
5. Hold down ⌂ to save settings and return to the data page.

Add a page

When first turned on, the favorite groups contain the maximum number of pages (eleven). To add a new page you must first delete at least one page ("Delete a page" above), otherwise see "Edit a page (box layout)" on the previous page or "Edit a page (analog gauges layout)" above

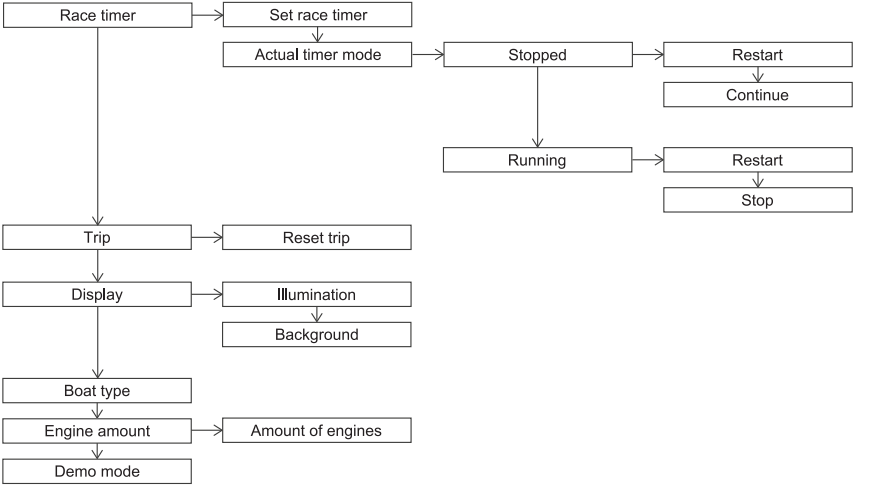
1. Press ⚙ to access the main menu and then scroll and select **FAVORITES**.
2. Scroll and select the favorite group where the page will be added.
3. Scroll until you see an empty page (**NO SCREEN**) and select it.
4. Scroll and select the new page layout: the page opens.
5. Scroll and select the data to be displayed on the page or any boxes (see the example "Edit a page (box layout)" on the previous page or).
6. Hold down ⌂ to save settings and return to the data page.

Change the number of engines to be displayed

1. Press ⚙ to access the main menu and then scroll and select **USER CONFIG**.
2. Scroll and select **Engine amount**, then select **Amount of engines**.
3. Scroll and select the new number of engines.
4. Hold down ⌂ to save settings and return to the data page.

General settings

Menu layout USER CONFIG



Menu description USER CONFIG

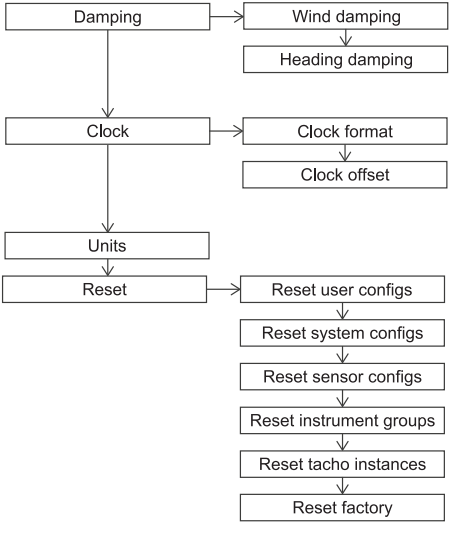
***Note**: the underlined value/command is the default value/command.*

Setting	Description	Possible values/commands
Race timer > **Set race timer**	Timer or chronometer. The time is counted backwards or forwards starting from the set value.	From 00:00 to 99:59 hh:mm (<u>00:10</u>). If = 00:00 the chronometer function starts, otherwise the timer function starts.
Race timer > **Actual timer mode**	State and commands for timer/chronometer	• **Running** / **Stopped**: active or stopped count. • **Stop**: stops count. • **Restart**: restarts count from the initial set value. • **Continue**: continues the count from the value where it was interrupted.
Trip	Reset of the distance for trip through water	• **Yes** • **No**
Display > **Illumination**	Brightness of the display and instruments belonging to the same group (see "Groups of devices" on page 38)	1 – <u>7</u>
Display > **Background**	Display background and character color	• **Day**: black background, white characters • **Night**: black background, red characters • **Fog**: black background, yellow characters • **White**: white background, black characters
Boat type	Type of boat	• **Sail yacht** • **Motor yacht**
Engine amount	Number of engines to be monitored	1– 4
Demo mode	Device operating simulation ***Note**: simulation mode remains on even after the device is turned off.*	• **On**: the device displays random values. • **Off**: turns off simulation mode.

System settings

Menu layout SYSTEM CONFIG

Note**: the units of measure depend on parameter **SYSTEM CONFIG** > **Units



Menu description SYSTEM CONFIG

***Note**: the underlined value/command is the default value/command.*

Setting	Description	Possible values/commands
Damping > **Wind damping**/ **Heading damping**	Data damping, see " Damping" on page 23	• **No** • **Low** • **Medium** • **High**
Clock > **Clock format**	Time format	• 12 h • 24 h
Clock > **Clock offset**	Time zone	From -12 to +12 h (0)
Units	Units of measure for the values displayed	• **Metric** • **Imperial** • **Nautical** • **Custom**: fully customizable See "Unit of measure" on the next page.
Reset > **Reset user configs**	Restoration of factory default settings for trip distance, illumination, display color, favorite groups	• **Yes** • **No**
Reset > **Reset system configs**	Restoration of factory default settings for damping, clock, unit of measure, alarms	• **Yes** • **No**
Reset > **Reset sensor configs**	Restoration of factory default settings for all sensors	• **Yes** • **No**
Reset > **Reset instrument groups**	Restoration of factory default settings for groups of devices	• **Yes** • **No**
Reset > **Reset tacho instances**	Restoration of engine IDs connected to tachometers on the VDO CAN bus network	• **Yes** • **No**

Setting	Description	Possible values/commands
Reset > **Reset factory**	Restoration of all settings, including MediaBox, to factory settings	• **Yes** • **No**
Reset > **Reset MediaBox**	Available only with MediaBox connected. Only restore MediaBox settings to factory settings	• **Yes** • **No**

Unit of measure

Managed units of measure are provided below:

Datum	Metric	Imperial	Nautical	Custom
Distance	km	mi	nmi, ft	km, mi, nm
Boat speed	kmh	mph	kn	km/h, mph, kn
Wind speed	kmh	kn	kn	km/h, kn, m/s, bft
Depth	m	ft	ft	m, ft, fath
Pressure	bar	psi	psi	bar, kPa, psi
Barometer	hPa	inHg	inHg	hPa, mmHg, inHg
Fuel	l	gal	gal	l, gal
Temperature	°C	°F	°F	°C, °F

Damping

The function makes the displayed values more stable. It is available for wind and compass data.

Example

*With medium-strong wind, to prevent the wind speed value from quickly and suddenly changing, set damping to **High** or **Medium**. On the contrary, with slight or no wind, set **No** or **Low** for a reactive indication.*

Alarm management

Signal mode

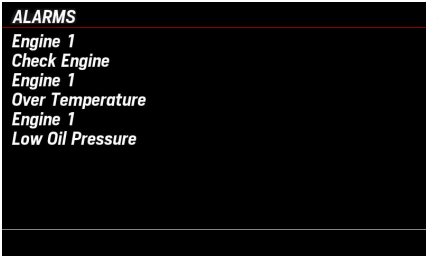
The alarms are processed and transmitted by Nav Box to the display based on data read by the NMEA 2000, SAE J1939 and NMEA 0183 networks or the connected analog and digital sensors. The alarms concern the engines on the network and other navigation parameters.

When an alarm is triggered, the pop-up with the alarm description appears on the display, the buzzer sounds (if enabled) and the indicator light for the alarm type appears on Nav Control (see "Signals on Nav Control" on the next page).

All active alarms appear in the **ALARMS** > **Active alarms** page.

***Note**: an alarm configured as disabled is ignored and will not appear in the alarm list. The alarm signal is inhibited during device configuration.*

Active alarm page signals



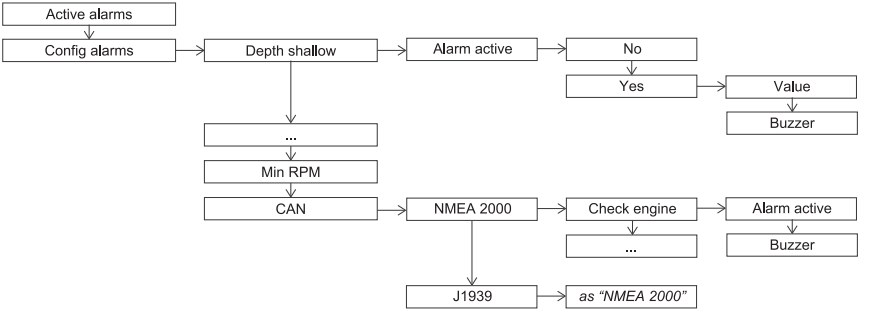
Alarms are listed from the most to the least severe.

Signals on Nav Control

When an alarm is triggered, the red indicator light appears on the screen of all the Nav Control devices on the network. The indicator lights identify three types of alarms.

Icon	Alarm
	Engine alarms
	Battery alarms
	Other alarms

Menu layout ALARMS



Acknowledge an alarm

When an alarm is triggered, the pop-up appears and the buzzer sounds (if enabled).

To acknowledge the alarm and mute the buzzer, press any button on Nav Control: the pop-up closes and the alarm is saved in the **ALARMS** > **Active alarms** page. The alarm is displayed in the **Active alarms** page for as long as it remains active. In addition, the indicator light on Nav Control stays on and the alarm icon remains visible in the data pages.

View the active alarm list

If at least one alarm is active, press the ⚙ button to access the main menu, and then scroll and select **ALARMS** > **Active alarms**: the list of all active alarms appears.

Alarm configuration on Nav Box

Configuration of alarms is transmitted from the display to Nav Box, which then memorizes it. If there are several AcquaLink displays on the VDO CAN bus network, it is sufficient to configure the alarms from one display. The alarm messages are sent by Nav Box to all the devices.

Configure alarms from sensors

1. Press ⚙ to access the main menu and then scroll and select **ALARMS** > **Config alarms**.
2. Scroll and select the alarm to be configured.
3. Scroll and select **Alarm below active**/**Alarm above active**, then scroll and select **Yes** or **No** to activate/deactivate the alarm.
4. To only activate the alarm, scroll and select **Value**, then set the threshold value.
5. To enable/disable the buzzer, scroll and select **Buzzer**, then scroll and select **Yes** or **No**.
6. Hold down ⌂ to return to the data pages.

Configure alarms from NMEA 2000/SAE J1939 network

1. Press ⚙ to access the main menu and then scroll and select **ALARMS** > **Config alarms**.
2. Scroll and select **CAN** then scroll and select the network: the managed alarm list appears.
3. Scroll and select the alarm to be configured.
4. Select **Alarm active**.
5. Scroll and select **Yes**/**No** to enable/disable the alarm signal through the pop-up and the indicator light on Nav Control.
6. To enable/disable the buzzer, scroll and select **Buzzer**, then scroll and select **Yes** or **No**.
7. Hold down ⌂ to return to the data pages.

Menu description ALARMS

Alarm	Description	Possible values/commands	Default
Depth shallow	Low water minimum threshold	0–9.9 m	2 m, buzzer **Yes**
Depth navigation	Maximum threshold. For example, a value near the maximum value measurable by the sensor. Safety depth minimum threshold	0 – 99.9 m 0 – 99.9 m	50 m, buzzer **No** 5 m, buzzer **No**
Wind	Wind speed maximum threshold	0 – 99.9 km/h	39.9 km/h, buzzer **No**
Battery	Battery voltage minimum threshold	0 – 32.9 V	10.8 V, buzzer **Yes**

Alarm	Description	Possible values/commands	Default
Engine water temp	Water temperature maximum threshold	0 – 139 °C	110 °C, buzzer **Yes**
Engine oil temp	Engine oil temperature maximum threshold	0 – 149 °C	120 °C, buzzer **Yes**
Engine oil pressure	Engine oil pressure minimum threshold	0 – 9.9 bar	0.5 bar, buzzer **Yes**
Fuel	Fuel level minimum threshold	0 – 99 %	20 %, buzzer **Yes**
Fresh water	Fresh water minimum threshold	0 – 99 % m	20 %, buzzer **Yes**
Waste water	Waste water maximum threshold	0 – 99 %	80 %, buzzer **Yes**
Min RPM	Engine revolutions minimum threshold. Only values under the threshold will be considered to trigger engine alarms.	0 -990 rpm	300 rpm
CAN	Alarm access from CAN bus (NMEA 2000 and J1939). See "Alarm management" on page 24	-	-

Sensor configuration

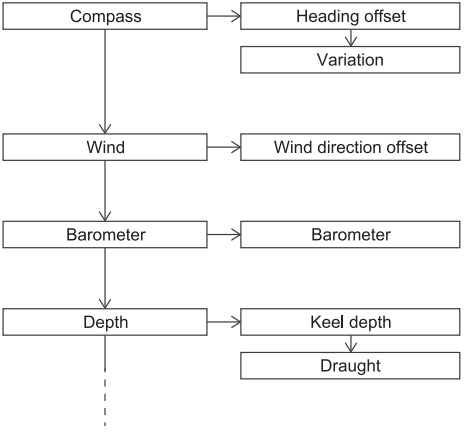
Configuration of sensors connected to Nav Box

Configuration of sensors is carried out through the display and transmitted to Nav Box, which then memorizes it. If there are several AcquaLink displays on the VDO CAN bus network, the same configuration settings are visible on each display.

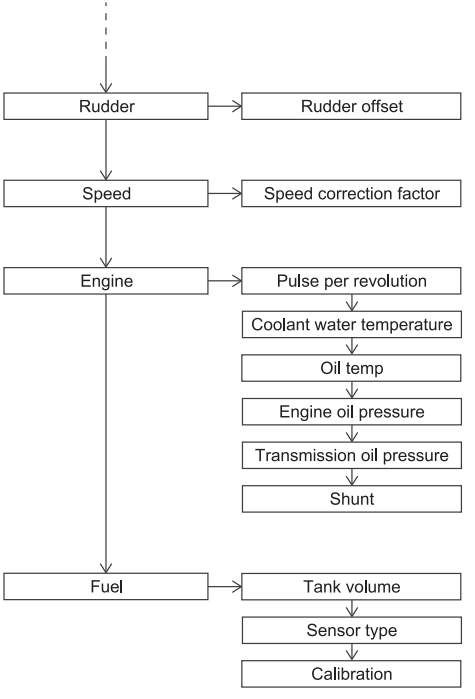
Menu layout SENSOR CONFIG

Only sensors connected to display analog inputs can be configured and/or calibrated.

Note*: the units of measure depend on parameter **SYSTEM CONFIG** > **Units***



Sensor configuration



Configuration and calibration

Nav Box recognizes the connected sensors and applies the default calibration values. For the engine data simply set the type of sensor and the value is read correctly. Other sensors can be configured by setting a correction value for the value read by the sensor. It is possible to configure and calibrate the fuel level sensor.

Set the engine data sensors

1. Press ⚙ to access the main menu and then scroll and select **SENSOR CONFIG**.
2. Scroll and select **Engine**.
3. Scroll and select the data (e.g. **Oil temp**). To view factory settings, see "Sensor types" on page 33
4. Scroll and select the type of sensor (e.g. **+50 to 150 °C**).
5. Hold down ⌂ to return to the data pages.

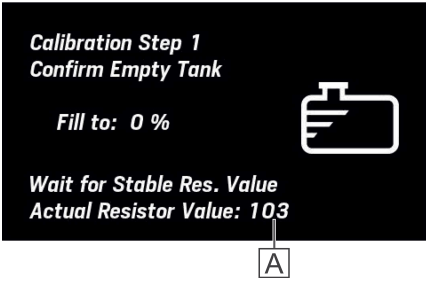
Configure the sensor for engine revolutions in frequency

1. Press ⚙ to access the main menu and then scroll and select **SENSOR CONFIG**.
2. Scroll and select **Engine**.
3. Select **Pulse per revolution**.
4. Set the offset factor.

   NOTICE: confirm all the digits to save the value.
5. Hold down ⌂ to return to the data pages.

Configure and calibrate the fuel level sensor

1. Press ⚙ to access the main menu and then scroll and select **SENSOR CONFIG**.
2. Scroll and select **Fuel**.
3. Select **Tank volume**, to set tank capacity.
4. Scroll and select **Sensor type**, then scroll and select the sensor type.
5. Scroll and select **Calibration**, then select the one or five point calibration procedure (**Do 1 point cal**/**Do 5 point cal**): calibration instructions and the ohm value read in real-time by the sensor **[A]** appear.
6. Empty the tank and wait for the read value to stabilize. Then confirm by pressing the knob.
7. For five point calibration, proceed with all calibration points by following the on-screen instructions.
8. Hold down ⌂ to return to the data pages.



Delete the calibration on the fuel level sensor

1. Press ⚙ to access the main menu and then scroll and select **SENSOR CONFIG**.
2. Scroll and select **Fuel**.
3. Scroll and select **Calibration**, then select **Delete cal**: default factory settings are restored.
4. Hold down ⌂ to return to the data pages.

Configure the other sensors

Following is the procedure to configure the compass and wind, pressure, depth, rudder angle and speed sensors.

1. Press ⚙ to access the main menu and then scroll and select **SENSOR CONFIG**.
2. Scroll and select the type of sensor (e.g. **Rudder**).
3. Scroll and select the configuration parameter (e.g. **Rudder offset**) and set the value. To view factory settings, see "Sensor types" on the facing page

   NOTICE: confirm all the digits to save the value.
4. Hold down ⌂ to return to the data pages.

Sensor types

Note**: the underlined value/command is the default value/command. The units of measure depend on parameter **SYSTEM CONFIG** > **Units

Setting	Description	Possible values/commands
Compass > **Heading offset**	Alignment between compass bow and boat bow	± 0.0 – 180 ° (0 °)
Compass > **Variation**	Alignment between the magnetic North and true North	± 0.0 – 180 ° (0 °)
Wind > **Wind direction offset**	Alignment between the wind sensor position and longitudinal boat axis	± 0.0 – 180 ° (0 °)
Barometer	Alignment between the barometer and the real atmospheric pressure	± 0 – 999 hPa (0)
Depth > **Keel depth**	Distance between the transducer and keel to calculate free water	0 – 9.9 m (2m)
Depth > **Draught**	Boat draught	0 – 9.9 m (0.3m)
Rudder > **Rudder offset**	Alignment between the sensor center and counter-rudder blade	± 0 – 120 ° (0 °)
Speed > **Speed correction factor**	Alignment between the sensor Speed through water (STW) and real boat speed. See "Calculate the speed offset factor" on page 35.	0 – 199.99 ° (1.00 °)
Engine > **Pulse per revolution**	Offset factor to calculate the engine revolution number based on the frequency signal value	0.0 – 655.34 (1.0).
Engine > **Coolant water temp**	Temperature sensor for engine liquid coolant	• **+40 to 120 °C** (series 323-80x sensor) • **-40 to 150 °C** (sensor A2C59900813) • **-40 to 140 °C** (sensor A2C59515306) • **-40 to 130 °C** (sensor A2C59900816)

Setting	Description	Possible values/commands
Engine > **Oil temp**	Temperature sensor for engine oil	• **+50 to 150 °C** (series 323-80x sensor) • **-40 to 130 °C** (sensor A2C59900816)
Engine > **Engine oil pressure**	Pressure sensor for engine oil	• 2 bar • 3 bar • 5 bar • 10 bar • 16 bar • 25 bar • 30 bar
Engine > **Transmission oil press**	Pressure sensor for transmission oil	• 2 bar • 3 bar • 5 bar • 10 bar • 16 bar • 25 bar • 30 bar
Engine > **Shunt**	Shunt capacity	• 60 A (A2C59514043) • 150 A (A2C59514047)
Fuel > **Tank volume**	Maximum fuel tank capacity	0 – 1000 l

Setting	Description	Possible values/commands
Fuel > **Sensor type**	Fuel level sensor	• 2 - 90 Ω • 3 - 180 Ω • 240 - 33 Ω
Fuel > **Calibration**	Calibration of the fuel level sensor	• **Not calibrated**: sensor not calibrated manually but with factory default calibration. • **Do 1 point cal**: one point calibration • **Do 5 point cal**: 5 point calibration • **Delete cal**: eliminates any calibration and restore factory default settings.

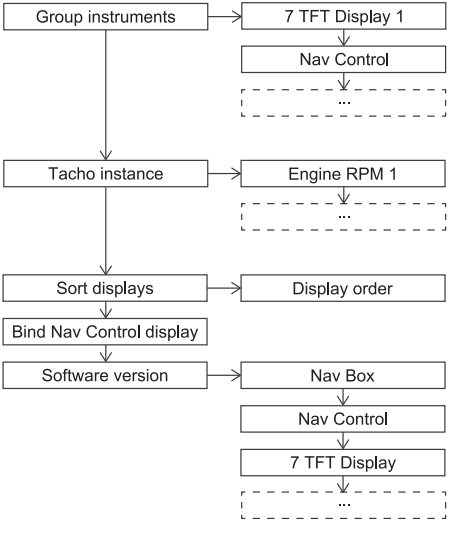
Calculate the speed offset factor

The speed offset factor lets you align the speed through water (STW) to the actual speed. If the measured speed differs from the real boat speed for more than 0.5 kn, this factor can be adjusted.

Increasing the offset factor reduces the displayed speed through water (STW).

Management of network devices

Menu layout NETWORK



Menu description NETWORK

***Note**: the underlined value/command is the default value/command.*

Setting	Description	Possible values/commands
Group instruments	Grouping of devices on VDO CAN bus network for illumination management	**Group 0**– **Group 7**
Tacho instance	Matching between tachometers on the VDO CAN bus network and NMEA 2000 ID of the engines to be monitored	• **Instance** 0 – 3: NMEA 2000 ID of the engine* • **Auto instance**: the tachometer displays the data for the engine with the lowest ID.
Sort displays	Order of displays on the network	Numbered list of displays on the network
Bind Nav Control to display	Matching between Nav Control and display	List of displays on the network
Software version	Software version of each device on the network	List of devices on the network and software versions

Note: NMEA 0 ID = engine 1; NMEA 1 ID= engine 2 etc.*

Groups of devices

The devices connected to the network through VDO CAN bus and EasyLink can be grouped into seven groups. Devices belonging to the same group share illumination settings.

Associate the display to a group

1. Press ⚙ to access the main menu and then scroll and select **NETWORK**.
2. Select **Group instruments**: the display blinks and the list of all devices on the network appears.
3. Scroll and select the display.
4. Scroll and select the group to be associated to the display.
5. If necessary, repeat steps 3 and 4 for all devices on the network: each time, the display of the selected device blinks.
6. Hold down ⌂ to save settings and return to the data page.

Match an engine to a tachometer

1. Press ⚙ to access the main menu and then scroll and select **NETWORK**.
2. Scroll and select **Tacho instance**: the list of tachometers on the network is displayed; the first on the list is selected and blinks.
3. If necessary, scroll and select a different tachometer.
4. Scroll and select the engine ID to be monitored.
5. Hold down ⌂ to save settings and return to the data page.

Order of displays on the network

When there are several AcquaLink displays on the VDO CAN bus network, each display is automatically assigned a progressive ID (1, 2, 3 etc.). The ID indicates the order in which the displays can be selected through Nav Control. If necessary, the order of the displays can be changed.

Change the display order

1. Press ⚙ to access the main menu and then scroll and select **NETWORK**.
2. Scroll and select **Sort displays**: the display icon is highlighted in green and the relative ID appears on the other displays.
3. Select the display icon: the ID of the icon turns red.
4. Scroll to move the icon to the desired position, then press the knob to confirm: the IDs update according to the new order.
5. To save changes, press ⌂ then scroll and select **SAVE**
6. Hold down ⌂ to return to the data pages.

Matching between display and Nav Control

Matching between the display and Nav Control allows the display to be controlled only with the matched Nav Control(s). The displays that are not matched can be controlled from any Nav Control on the network. Up to three Nav Controls can be matched to each display, and up to three displays can matched to each Nav Control.

Match the display to Nav Control

1. Press ⚙ to access the main menu and then scroll and select **NETWORK**.
2. Scroll and select **Bind Nav Control to display**.
3. Follow the instructions on the screen to proceed with matching.
4. Hold down ⌂ to save settings and return to the data pages.

MediaBox use

Operations

MediaBox can be controlled by each Nav Control matched to the display (see "Match the display to Nav Control" on page 40) or the VDO MediaBox app available for Apple and Android devices in their stores. The app lets you remotely control MediaBox. It can control the following sources:

- FM stations
- AM stations
- playlists from USB key
- audio files from Bluetooth devices

MediaBox must be connected to the NMEA 2000 network and to Nav Box, with a dedicated adapter cable NMEA 2000-VDO CAN bus. Once connected to the NMEA 2000 network, MediaBox remains in stand-by, awaiting to be turned on from the display or VDO MediaBox app.

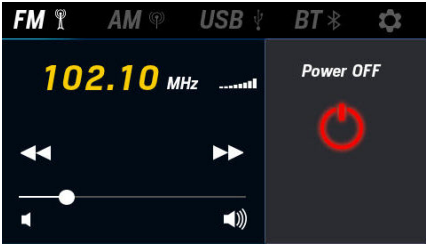
Open MediaBox

The relevant page must be enabled to open MediaBox. The page is already included in the default configuration. If not found, see "Add a MediaBox page" on page 45) to add it.

On/Off

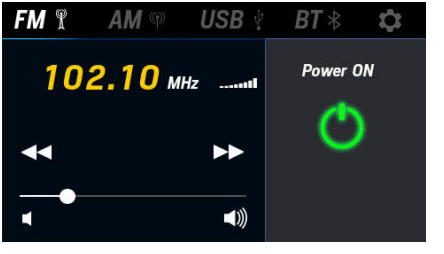
1. The "MediaBox not powered" message appears the first time the display is turned on: the display is connected to MediaBox but the media player is off.

2. Pressthe knob: the main page appears with the red **Power OFF** symbol.



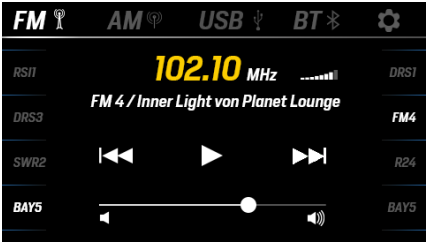
3. Press the knob again: MediaBox turns on.
4. Press the knob again: MediaBox turns off.

***Note**: if the USB and BT sources are not connected, their menus are disabled.*



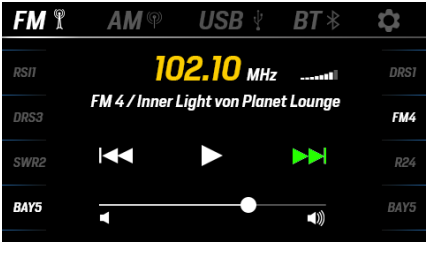
Listen to FM/AM radio stations

1. Repeatedly press the button to position the menu bar on the **FM** source and select it or scroll and select the **AM** source.
2. Scroll default stations and select the one you want.

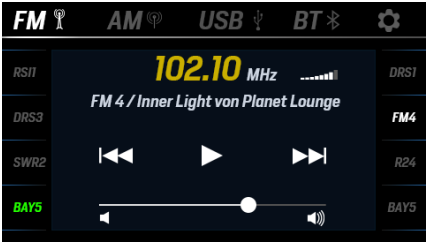


Set FM/AM radio stations

1. Repeatedly press the button to position the menu bar on the **FM** source and select it or scroll and select the **AM** source.
2. Scroll to enable commands ⏮ or ⏭. Briefly press the knobto scroll frequencies, hold it down to scan them.



3. Scroll to move to the position where the station will be set and hold down the knob to save.

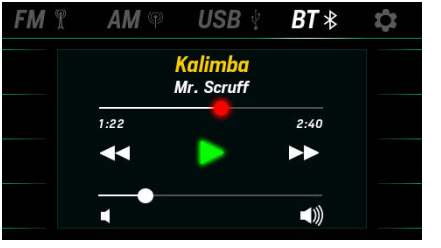


Listen to a playlist from USB key

1. Insert the USB key with the playlist.
2. Repeatedly press the button until positioned on the menu bar. Scroll and select the **USB** source.
3. Scroll and select the various commands.
4. To select a track, scroll and select the playlist: the track list appears.

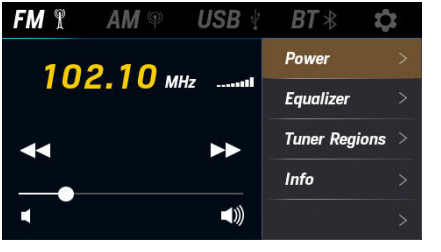
Listen to tracks from cell phone

1. Link MediaBox to a cell phone via Bluetooth.
2. Repeatedly press the button until positioned on the menu bar. Scroll and select the **BT** source.
3. Scroll and select the various commands.



Set MediaBox operations

1. Repeatedly press the button until positioned on the menu bar. Scroll and select .
2. To adjust the volume, scroll and select **Equalizer**.
3. To obtain the correct frequencies for the geographical area, scroll and select **Tuner region**.
4. To obtain information on the media player, scroll and select **Info**.



Add a MediaBox page

1. Press to access the main menu and then scroll and select **FAVORITES**.
2. Scroll and select the favorite group where the page will be added.
3. Scroll until you see an empty page (**NO SCREEN**) and select it.
4. Scroll and select the page layout **RADIO**: the layout opens.
5. Hold down to save settings and return to the data page.

Reset MediaBox

To restore factory settings:

1. Press ⚙ to access the main menu and then scroll and select **SYSTEM CONFIG**.
2. Scroll and select **Reset** > **Reset factory**.

VDO Marine Configuration Tool use

Description

VDO Marine Configuration Tool desktop software lets you:

- Update display software and firmware.
- Run diagnostics and simulations.
- Configure the system and sensors connected to the display.

Operations

VDO Marine Configuration Tool communicates with devices connected on the NMEA 2000 network through VDO Diagnostic Tool connected to the PC via USB.

For further information and instructions for use on VDO Marine Configuration Tool, see VDO Marine Configuration Tool User manual available at www.vdo-marine.com.

Troubleshooting

Display problems

Problem	Cause	Solution
The display and Nav Control do not turn on.	No connection or faulty connection between the devices on the VDO CAN bus network.	Check the connections on the VDO CAN bus network and make sure the last network device is connected to a termination.
	VDO CAN bus network not supplied with power.	Check the connection of the VDO CAN bus network to Nav Box.
	Nav Box is not connected to power.	Check the connection.
The displayed values are not those expected.	Incorrect sensor configuration.	Check configuration in menu **Sensor config**.
	Incorrectly connected sensor.	Check connection of the sensors to the NMEA 2000, NMEA 0183, SAE J1939 network and the digital and analog inputs on Nav Box. Refer to the Nav Box documentation.
	The NMEA 2000/SAE J1939 network backbone was incorrectly created.	Check connections and make sure there is a termination at the beginning and end of the backbone.
"--" and not the expected value is displayed or the gauge pointer blinks in the layout **NAV DASH**.	Data not available on the network.	Check the correct operations of the sensor.
	Sensor not connected.	Connect the sensors to the NMEA 2000, NMEA 0183, SAE J1939 network or the digital and analog inputs on Nav Box. Refer to the Nav Box documentation.
	The NMEA 2000/SAE J1939 network backbone was incorrectly created.	Check connections and make sure there is a termination at the beginning and end of the backbone.
"Invalid value"	The sensor to be calibrated is faulty or not connected to Nav Box.	Check or replace the sensor.

"No MediaBox connected"	MediaBox is not connected to the NMEA 2000 network or to the power supply.	Check connections.
"MediaBox not powered"	MediaBox is connected but off.	Turn on MediaBox, see "MediaBox use" on page 41

Technical specifications

General features

Material	PBT and glass screen
Connectors	• 2 Video M12 • 2 VDO CAN bus
Input data	via VDO CAN bus from Nav Box
Output data	VDO CAN bus
Protection grade	IP67
Display	TFT 7"

Environmental specifications

Working temperature	From -25 to +70 °C
Storage temperature	From -40 to +85 °C

Electrical specifications

Rated voltage	12 / 24 V
Voltage tolerance	9-32 V
Working current	< 600 mA @ 12 V
Absorption (LEN)	2

Conformity

Conformity	CE
Directives	2014/30/EU (Electromagnetic compatibility) 2011/65/EU (Electrical-electronic equipment hazardous substances)
Reference standards	IEC 60945: 2002-08 (environmental class: exposed)

Disposal instructions

Separate waste and use the collection centers indicated by the government or local public agencies.

Correct disposal and recycling will contribute to the prevention of potentially harmful consequences to the environment and population.

Spare parts, sensors and accessories

Available spare parts

Product	Part number
White bezel	A2C3995200001
Black bezel	A2C59501968
Sun cover	A2C59501973
Cable with video connector	A2C99791100

Available accessories

To view available accessories, visit www.vdo-marine.com.

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