

User Manual

Marine Pro 400 Series / 200 Series

DCU 410E Engine Controller, P/N 1006445
DCU 408E Engine Controller, P/N 1006510
DCU 210E Engine Controller, P/N 1006475
DCU 208E Engine Controller, P/N 1006477

RP 410E Remote Panel, P/N 1006446
RP 420E Remote Panel, P/N 1006484
RP 480i Remote Panel, P/N 1500061
RP 210E Remote Panel, P/N 1006476
RP 220E Remote Panel, P/N 1006472
RP 206E Remote Panel, P/N 1006478



Auto MASKIN

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Preface

About this Manual

This manual has been published primarily for professionals and qualified personnel.

The user of this material is assumed to have basic knowledge in marine systems, and must be able to carry out related electrical work.



Work on the low-voltage circuit should only be carried out by qualified and experienced personnel.

Installation or work on the shore power equipment must only be carried out by electricians authorized to work with such installations.

Responsibilities



It is the sole responsibility of the installer to ensure that the installation work is carried out in a satisfactory manner, that it is operationally in good order, that the approved material and accessories are used and that the installation meets all applicable rules and regulations.



Auto-Maskin continuously upgrades its products and reserves the right to make changes and improvements without prior notice.

All information in this manual is based upon information at the time of printing. For updated information, please contact your local distributor.



The crossed-out wheeled bin symbol indicates that the item should be disposed of separately. The item should be handed in for recycling in accordance with local environmental regulations for waste disposal.

By separating a marked item, you will help reduce the volume of waste sent to incinerators or land-fill and minimize any potential negative impact on human health and the environment.

Revisions

This User Manual is valid for the following software version of the Marine Pro 400 and 200 series products.

Software Version	Release
3.11 Patch 8	July 2026

User Manual revision: **July 2026**

Ordering Information

The Marine Pro covers a wide range of compatible products within both the 400- and 200 Series. Please visit our website for more information.

www.auto-maskin.com

Overview of Marine Pro

Marine Pro is divided into two main product series, the 400 series and the 200 series.



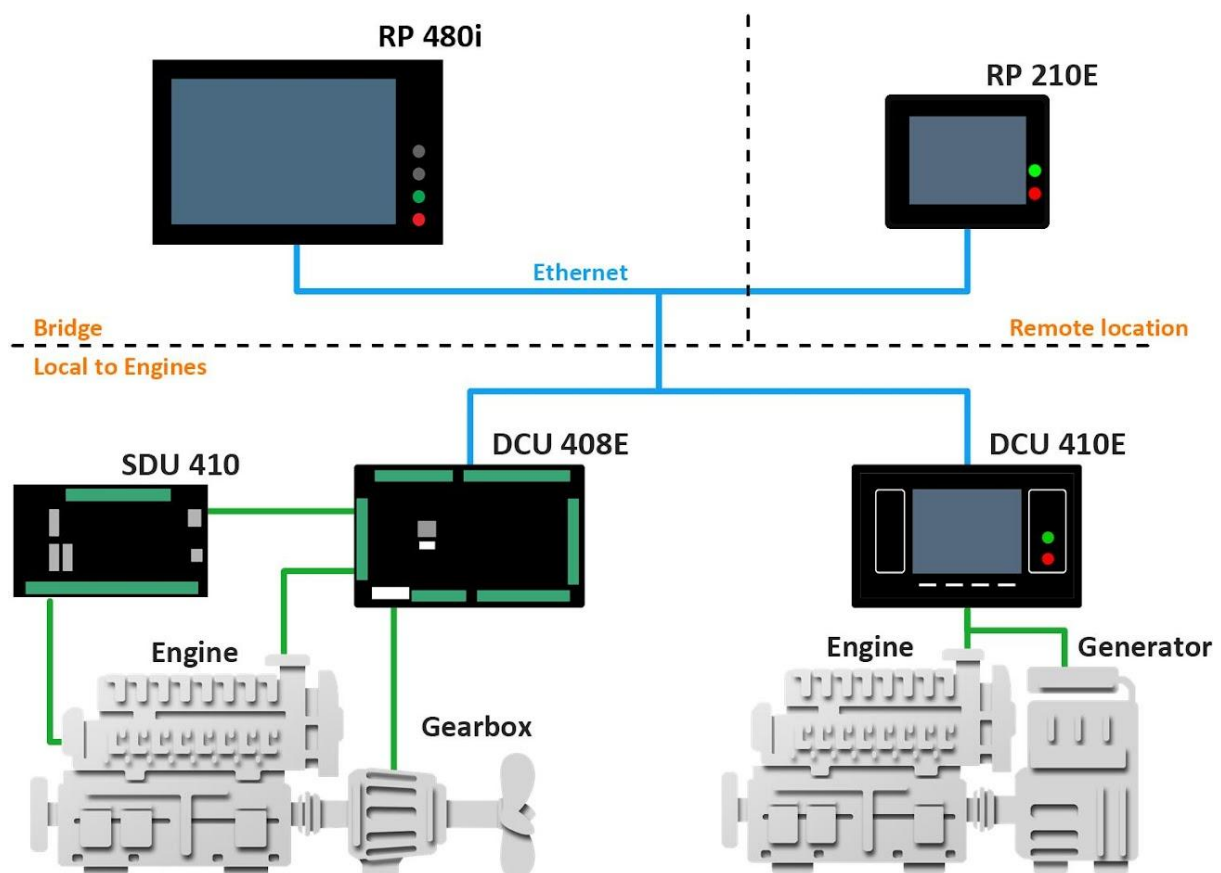
Components from the two product series can be combined in an installation. For example a RP 210E Remote Panel can be connected to DCU 410E Engine Controller.



All products with a touch screen shall be operated with care. Do not use sharp or hard objects.

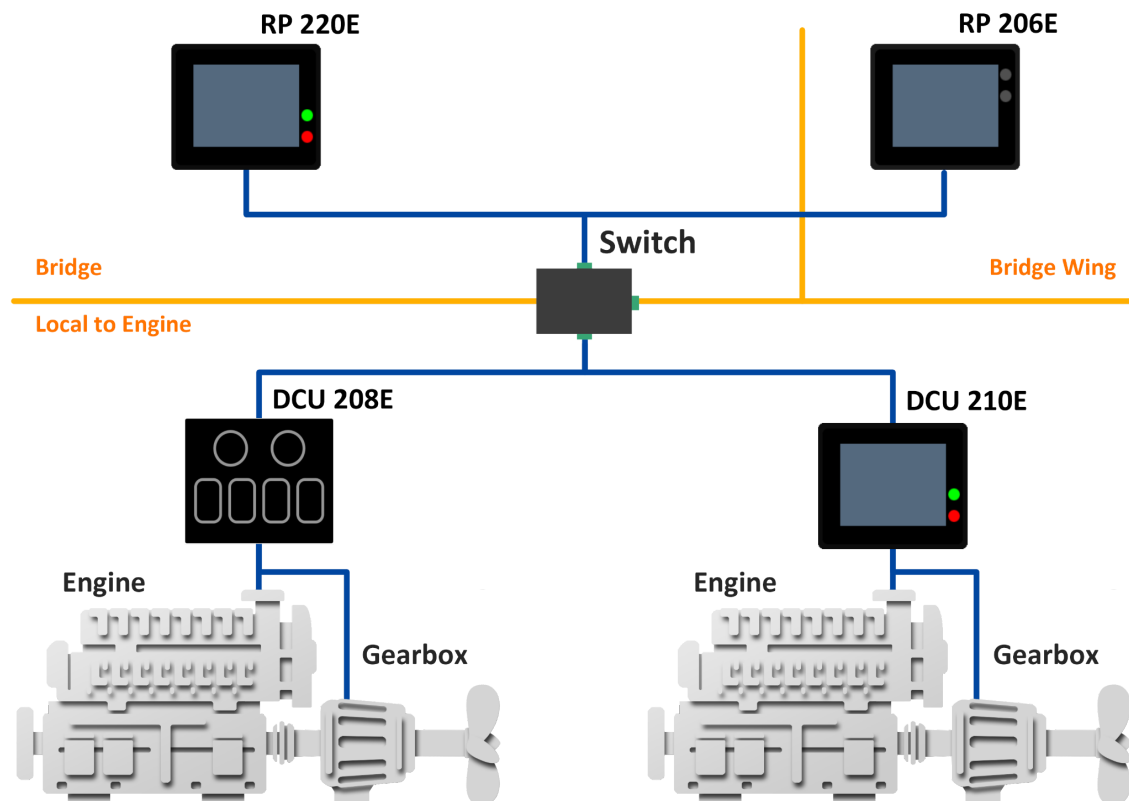
Overview of the 400 Series

The drawing below shows a typical layout.



Overview of the 200 Series

The drawing below shows a typical layout.



Engine Controllers

The DCU Engine Controller is the main building block in the Marine Pro 400 and 200 Series.

Engine sensor values are displayed on the color screen. Commands and other user interaction is carried out using buttons around the screen.

The selection of DCU Engine Controller depends on the type of installation.

DCU Engine Controller	Display
DCU 410E	5.7"
DCU 408E	-
DCU 210E	5.7"
DCU 208E	-



The DCU 408E and DCU 208E are equivalent products to DCU 410E and DCU 210E but without the display and buttons.

They are typically used in smaller engine rooms, where a Remote Panel is all that is needed.

Remote Panels

The optional RP Remote Panels brings everything on the DCU to a remote location, with the exact same user interface. It does not need any configuration, as it is reading the configuration from the DCU.

As such, the RP can easily be retrofitted.

RP Remote Panel	Maximum DCUs	Cameras	Display	Control (Start / stop)
RP 480i	8	4	12.1"	Yes
RP 410E	8	4	8.4"	Yes
RP 420E	2	1	5.7"	Yes
RP 220E	2	1	5.7"	Yes
RP 210E	1	1	5.7"	Yes
RP 206E	2	1	5.7"	No



The RP 410E is discontinued for new projects; please use the RP 480i as the designated replacement.

Safety Shutdown Units

To achieve a type approved solution a stand alone shutdown module can be used. The SDUs monitor dedicated sensors and can independently shut down the engine should a problem be detected.

The SDU Safety Shutdown Units are tightly integrated to the DCUs, and the DCUs show all important importation from the SDUs.

SDU Safety Shutdown Unit	Switch Channels	Analog Channels
SDU 404	4	-
SDU 410	8	-
SDU 420	12	3

Ethernet Switch

The Ethernet switch is not necessary if only one DCU and one RP is in use. These can then be wired with an Ethernet cable directly.

It is recommended to make use of an Ethernet switch though, as it simplifies PC configuration connection and future expansion to remote panels and/or camera interface.

Expansion

The basic system can be expanded with more input and output channels using the versatile RIO units (**R**emote **I/O**).

Currently, there are RIO units for

- General I/O expansion, RIO 410, RIO 210 and RIO 216
- Exhaust temperature monitoring, RIO 412
- Generator monitoring, RIO 425
- Load sharing, LSU 408

Marine Broadcast

The optional Marine Broadcast is a secure cloud-based remote monitoring service for connected vessels, accessible from any device.

The BC-LINK Router can be used to enable Internet access, if needed.

Scan the QR code to learn more and get started with Marine Broadcast, or visit

www.auto-maskin.com/broadcast-getting-started



Common Operation

Basic Concepts

In any Marine Pro installation each DCU is responsible for monitoring and controlling one engine. The DCU always holds an opinion on the status of the engine, **Engine State**. It enforces a mode of operation, **Operation Mode**, and it monitors and maintains diagnostics displayed in the **Alarm List**. A DCU is relaying most information about an engine to any connected RPs and it also defers control of the engine to connected RPs.

An RP, when connected to one or several DCUs, displays all available data from each DCU including the Engine State, the Operation Mode, and any active diagnostics.

There are three types of engine operations, Local, Remote or Automatic. Local operations are performed on the DCU itself and are typically intended to only be triggered from the engine room or within close vicinity of the engine. Remote operations are manually triggered typically from an RP or other remote equipment. Finally, automatic operations are performed by automated systems, for example a Power Management System, where no human is involved in the process.

Engine State

The Engine State is providing information about the status of the engine/DCU. It is always displayed on the DCU and is also available on connected RPs.

Engine State text	Description
Power Off	The DCU is in sleep/power off mode.
Ready	Indicates that the engine is not running and that the DCU is ready to start the engine.
Awaiting Ready	Only occurs if the DCU is configured for hold-to-start . This state is active for 10 seconds if a start attempt is terminated before the engine has started. Unless the engine revs up and starts within 10 seconds the DCU moves back to Ready state.
Initial Start Delay	Entered when the DCU receives an automatic start attempt. While in this state the DCU is merely waiting for a pre-configured amount of time before actually attempting to start the engine.
Prelube Manual	The DCU is carrying out a prelubing cycle before attempting to start the engine. A manual start attempt triggers this state.
Prelube Automatic	The DCU is carrying out a prelubing cycle before attempting to start the engine. An automatic start attempt triggers this state.

Engine State text	Description
Cranking Manual	The DCU is running the starter in an attempt to start the engine. This state is only reached for Manual Start attempts.
Crank Rest	The DCU is waiting for the next try to get the engine running. This state can only occur for Automatic Start attempts.
Cranking Automatic	The DCU is running the starter in an attempt to get the engine running. This state is only reached for Automatic Start attempts.
Awaiting Run Automatic	This state is only active if the DCU is configured to receive engine run indication via a switch input (aka Additional Run Indication). The DCU enters this state after an unsuccessful automatic start attempt and waits here for 10 seconds.
Awaiting Run	This state is only active if the DCU is configured to receive engine run indication via a switch input (aka Additional Run Indication). The DCU enters this state after an unsuccessful manual start attempt and waits here for 10 seconds.
Running	The engine is running.
Delayed Stop	The engine is running but the DCU has received an Automatic Stop command and is waiting for a configured amount of seconds before entering Cooling state.
Cooling	The engine is running but the DCU has received an Automatic Stop command and is keeping the engine running for a pre-configured amount of time before actually stopping it.
Safety Running	Indicates that the DCU is no longer sure about the actual status of the engine. Before the DCU lost connection to the engine it was running and this state indicates that the DCU believes it to still be running without actually knowing.
Safety Stopping	Indicates that the DCU is attempting to stop the engine but it is not receiving any data from the engine while doing so.
Normal Stopping	The DCU is attempting to bring the engine to a stop. This state is the result of a Manual Stop attempt.
Shutdown Stopping	The DCU is attempting to stop the engine as a result of a critical problem. Any event of severity Shutdown, triggers this state automatically.
Stopped	The DCU has successfully stopped the engine as a result of a Manual Stop command. The DCU remains in this state for 10 seconds before moving to Ready state.
Shutdown Stopped	The DCU has automatically stopped the engine as a result of a critical issue detected by the DCU. Any event of severity Shutdown triggers this operation. After 10 seconds in this state the DCU enters the Blocked state.

Engine State text	Description
Blocked	As long as there are unacknowledged or active events in the Alarm List of severity Shutdown this state is active. It is not possible to start or stop the engine until this has been resolved.
Start Disabled	The DCU has been deliberately placed in a state where it doesn't allow start of the engine. Typically there's an external switch or lever that triggers this state.
Start Disabled - Requesting Start Consent	The DCU has been deliberately placed in a state where it doesn't allow starting of the engine. This state indicates that a remote location is requesting that the operator changes allow start attempts by manually leaving this state.

Operation Mode

The operation mode defines what operations are possible. Available operation modes depend on the engine application configuration.

Engine Application Configuration	Available Operation Modes
Auxiliary	Local Manual Automatic
Combined	Local Harbor Emergency
Propulsion	Local Remote
Emergency	Local Emergency

Operation Mode	Indication	Description
Local		Local operation possible. Remote operation blocked. Automatic operation blocked.
Remote		Local operation blocked, unless allowed in configuration. Remote operation possible. Automatic operation blocked.
Manual		Local operation blocked, unless allowed in configuration. Remote operation possible.

Operation Mode	Indication	Description
		Automatic operation blocked.
Automatic		Local operation blocked, unless allowed in configuration. Remote operation possible. Automatic operation possible.
Harbor		Local operation blocked, unless allowed in configuration. Remote operation possible. Automatic operation blocked.
Emergency		Local and remote operation allowed. Operates in Shutdown Override mode.

Event Monitoring

The DCU Engine Controller displays and monitors sensors, either directly connected to the DCU, or connected through a bus such as J1939 or RIO Link.

Using the flexible configuration of the DCU, each sensor can be individually configured to issue events depending on various conditions, such as thresholds, conditions etc.

All events are shown in the alarm list. In order for an event to be removed from the alarm list the event needs to be inactive and acknowledged. In addition, all events are stored in a DCU internal event log which carries 5000 events which can be viewed on screen or downloaded for analysis.

All events can be configured with different severity

- Diagnostic
- Warning
- Alarm
- Load Reduction
- Shutdown

In case the DCU experiences a Shutdown event (typically from the SDU Safety Shutdown Unit), the DCU will automatically try to stop the engine.

It is possible to put the DCU in a Shutdown Override mode. In this mode, the DCU will treat the Shutdown events as Alarms.



Engine overspeed shutdown is never possible to override.

Also, for each shutdown sensor connected to the SDU, they can be individually configured to allow override or not. For instance, the emergency stop switch should never be possible to override.

Buttons

Home		The Home button displays the first page of instruments. Clicking this button when already displaying the first page of instruments enters the menu. On a RP Remote Panel with multiple DCUS, the Home button displays the Home page.
Alarm List		The Alarm List button silences the buzzer and shows the alarm list. Pressing the button again leaves the alarm list unless the buzzer is active.
Start Engine		The Start button initiates an engine start attempt. The behaviour varies depending on location and configuration.
Stop Engine		The Stop button initiates an engine stop attempt. The behaviour varies depending on location and configuration.
Up Button		Multi purpose navigation buttons used to move selection. These buttons are only available on the DCU 410E.
Down Button		

Screen Layout



The **Main Area** can show the following information depending on operation

- Instrument view
- Alarm list
- Menu

Header

Background

The header background is displaying the worst severity of any current event.

Header Background	Description
	No events.
	The worst event is Diagnostics. Flashing if unacknowledged.

Header Background	Description
	The worst event is Warning. Flashing if unacknowledged.
	The worst event is Alarm / Load Reduction or Shutdown. Flashing if unacknowledged.

Engine State

The engine state is displayed left aligned in the header.

Status Symbols

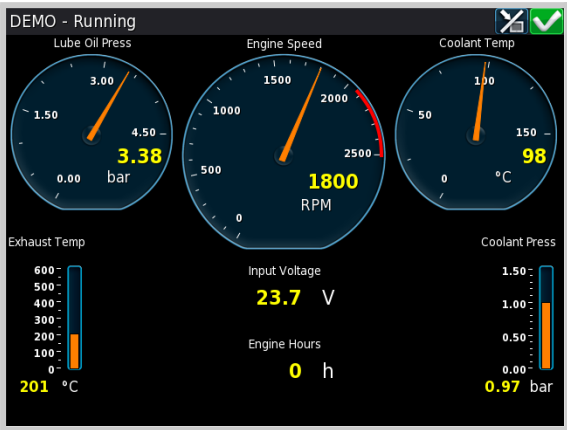
The following symbols may appear in the status bar and several symbols may be visible simultaneously.

	DCU is in automatic mode.		DCU is in manual mode.
	DCU is in local mode.		DCU is in harbor mode.
	DCU is in emergency mode.		
	DCU is in shutdown override mode.		A service interval is past due.
	All OK. (no alarms)		
	Gear in Neutral position.		Gear in Forward position.
	Gear in Reverse position.		Gear Engaged . (direction unknown)
	Gear status Unknown .		
	RP only: Active panel indicator		RP only: No Active Panel, Partial Active Panel, or full Active Panel.

Main Area

Instrument View

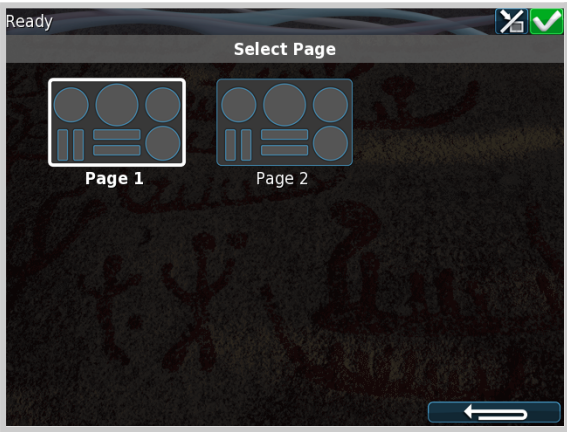
The instrument view displays the configured pages on the panel.



To do this	Press this
Select page	Center of the screen, or the configured Quick Nav shortcut.
Previous screen	Left-hand side (midway) of the screen, or the Up button.
Next screen	Right-hand side (midway) of the screen, or the Down button.

Select page

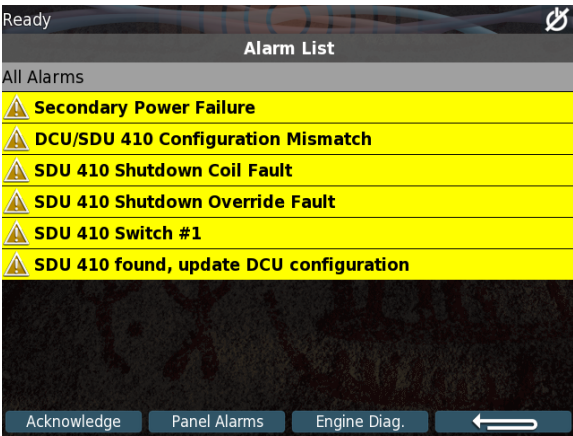
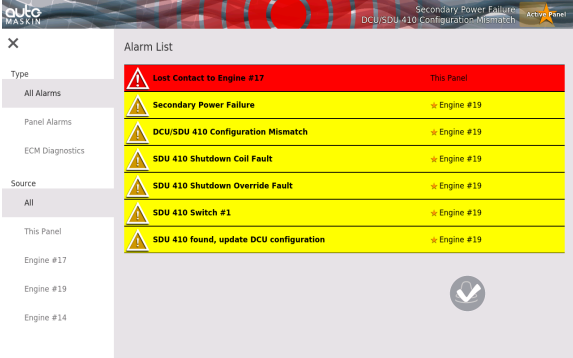
This is the quickest and easiest way to get an overview and select what page to navigate to.



In this example, there are two instrument pages available. Select one of the two thumbnail pages to move directly to that page.

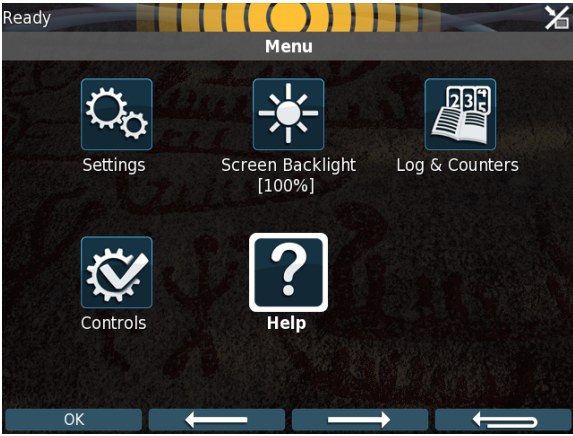
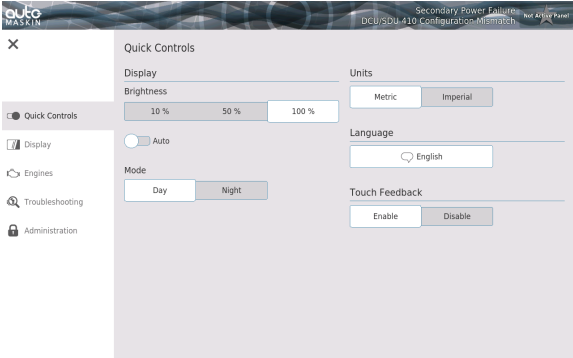
Alarm List

The alarm list displays all events, such as warnings, alarms, in an alarm list. On a DCU Engine Controller, the alarm list contains all events generated by this panel. On an RP Remote Panel, the alarm list encapsulates all events from all connected DCUs. Therefore, the RP includes additional filtering options.

	
E-products	i-products

Menu

The menu is looking slightly different depending on if the product is an **E-product**, such as DCU 410E, RP 410E, or if it is an **i-product**, such as RP 480i. The functionality is however the same.

	
E-products	i-products

Footer

The footer displays function buttons varying by context, and can be accessed by pressing the button.

The RP Remote Panel supports a function called **Operator Lock**. When operator lock is active, no user input is accepted from either touch screen or buttons, and this is indicated using the below symbol at the bottom of the screen.

	Operator Lock is active.
---	--------------------------

DCU Engine Controller

This chapter covers all DCU variants, for example DCU 410E and DCU 210E. There may be variations on how to perform a certain task based on this. For example as the DCU 410E does not feature a touch interface, all operator interaction is carried out using its physical buttons.

First Power On

Use a Web-browser to set up and configure the DCU.

PC Connection/Setup:

- Connect via Ethernet using a net browser
- From the Address Field in the Browser, type the IP-Address. Factory Default is **192.168.0.101**.
- Then log in to the unit. The username is '**DCU**' and the default password is '**1234**'.

For further details and information, please see the Configuration Manual.



At the first power-up the user will be guided through a Setup Wizard

1. Language selection and your choice is valid through the rest of the procedure.
2. Network settings. Make sure to follow common network configuration practice and take care when several units need to operate within the same network.

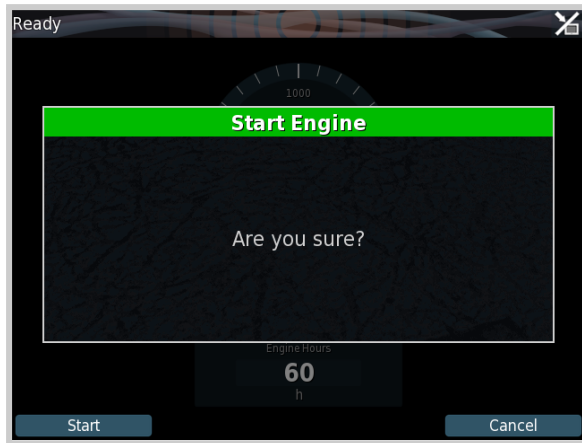
Configuration Dependency

The behavior of the panel depends on its configuration. The configuration of the DCU is not part of this document.

Start Engine

The start button can be configured as **latched** or **hold-to-start**. **Latched** means that the DCU completes the start/stop cycle once the button is pressed, and **hold-to-start** means that the operator must keep the button pressed until the engine has started or stopped.

Latched Start



If the button is configured as **latched**, press the start button, observe the confirmation dialog, and press the soft-button Start to start.

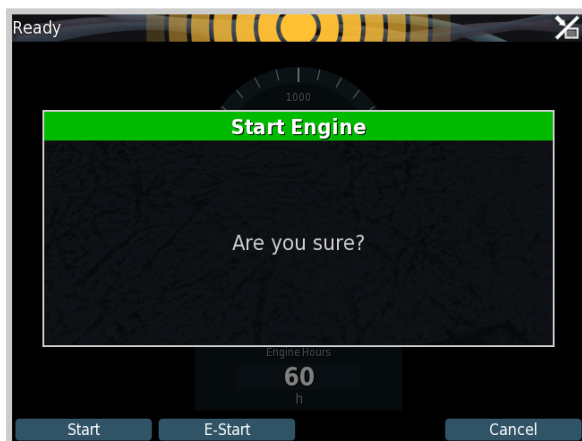
The DCU will complete the start sequence.

Hold-to-Start

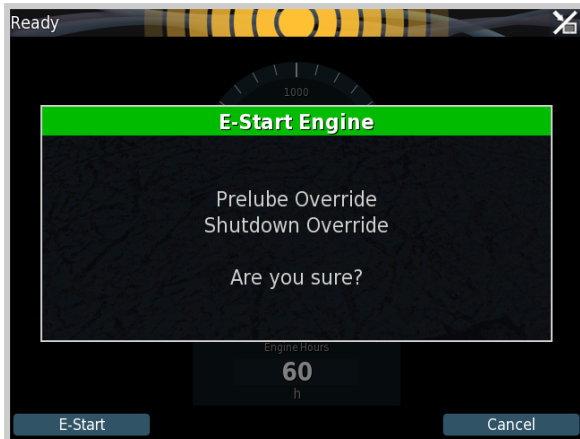
If the start button is configured as **hold-to-start**, press and hold the start button until the engine has started.

There will be no confirmation dialog.

Emergency Start



If the DCU is configured to allow emergency start, an **E-Start** option is available in the Start dialog.



The **E-Start** is designed to start the engine as quickly as possible in an emergency situation, and shall not be used for everyday start.



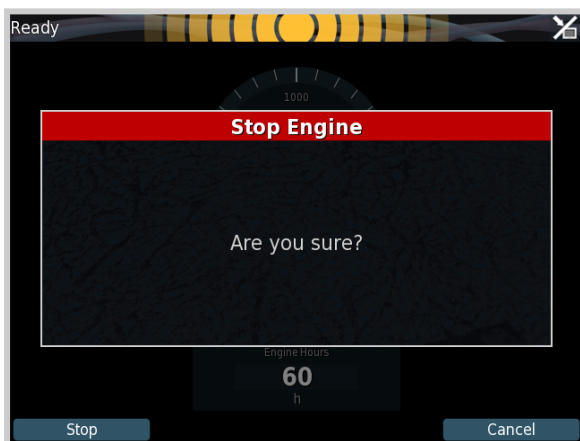
Activating E-Start will override any configured Prelube and also set Shutdown Override. The engine will start immediately, and run in a Shutdown Override mode setting.

If desired, the operator can switch off Shutdown Override mode once the engine has started.

Stop Engine

The stop button can be configured as **latched** or **hold-to-stop**.

Latched Stop



If the button is configured as **latched**, press the stop button, observe the confirmation dialog, and press the stop soft-button.

The DCU will complete the stop sequence.

Hold-to Stop

If the stop button is configured as **hold-to-stop**, press and hold the stop button until the engine has stopped.

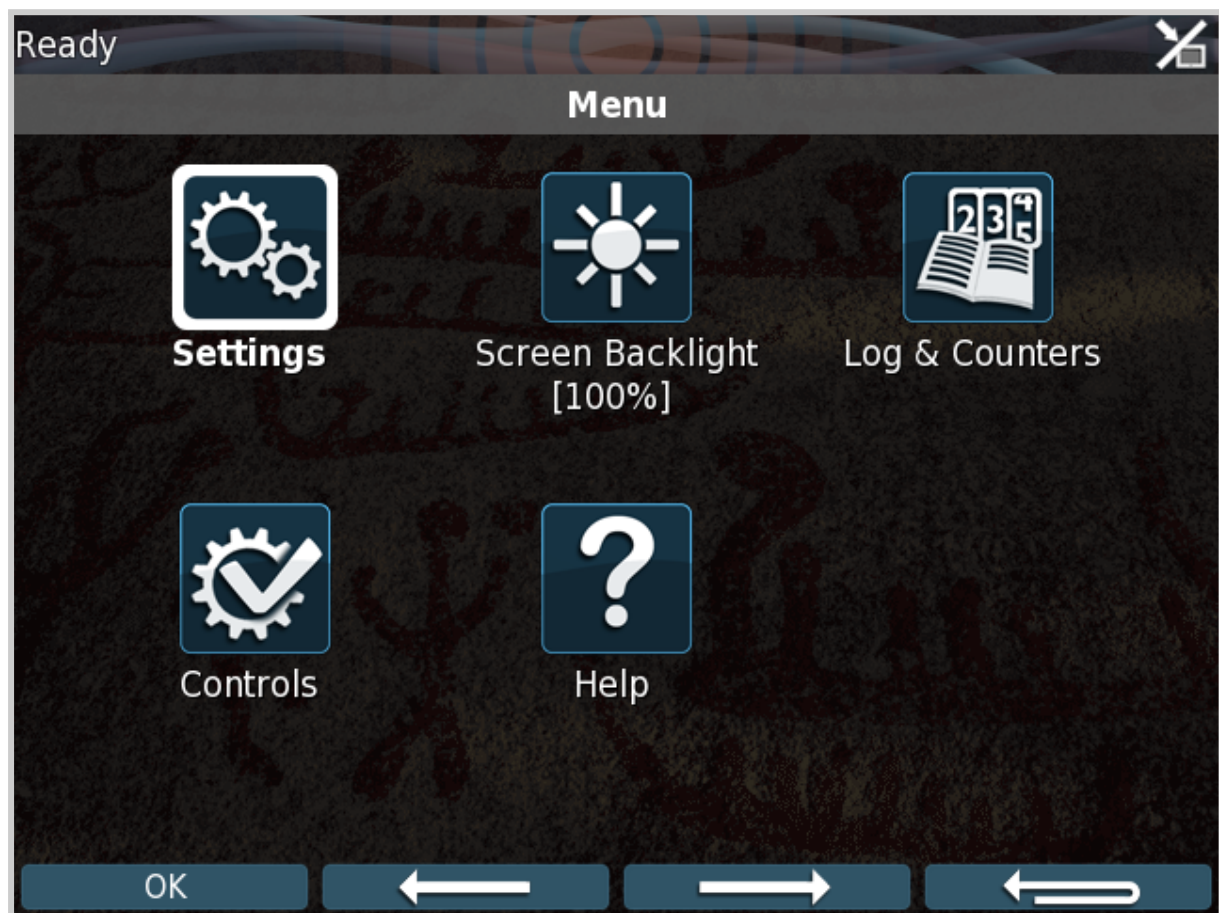
There will be no confirmation dialog.

DCU Menu

The menu is accessed by pressing the **Home** button. The menu is organized in different menu pages, where it is possible to adjust settings.

Menu

The first menu page is simply a navigation menu, where all menu options lead to other pages.

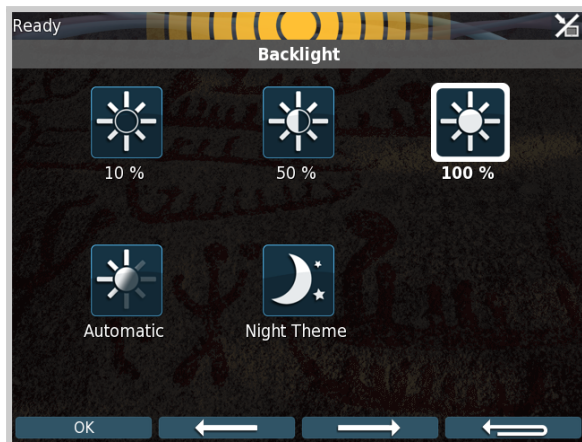


Settings

Display the Settings page.

Screen Backlight

Adjusts the backlight of the panel.



10%, 50%, 100%

Select fixed backlight operation.

Automatic

Select automatic backlight based on ambient light conditions.

Night Theme

Select day or night mode theme.



If setting brightness to 10%, this will take effect when leaving the menu.
Automatic selection is only available on DCU 410E.

Log & Counters

Display the Log & Counters page.

Controls

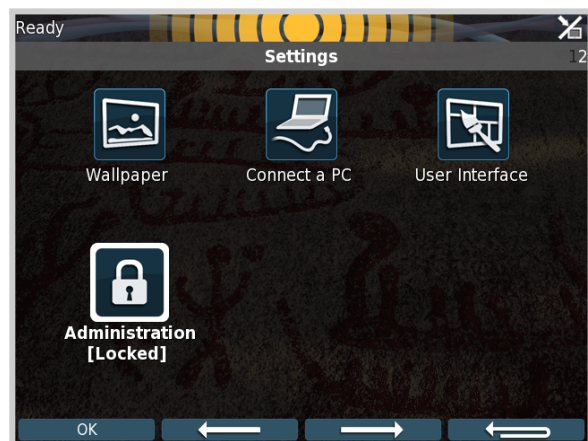
Display the Controls page.

Help

Display the Help page.

Settings

The Settings menu page allows the operator to access all settings accessible to the operator without having administrative privileges.



Mode

Select the operation mode of the panel.



The operation modes available are depending on the engine application configuration.

Start Disabled

Set to Active to disable start.

Button Beep

If enabled, any button press will give an audible buzzer feedback.

Language



Select any of the panel's built-in languages.

The panel configuration may not be translated to the selected language

Skin

Select which skin to be used.

- Flat
- Classic
- Chrome

Units

Select Metric or U.S. units for this panel.

Wallpaper

Select any of the built-in wallpapers as a background for instruments, menus and popup dialogs.

Connect a PC

The panel has an built-in DHCP server, which can be used to assign network addresses to other equipment connected to the network.



The equipment connected must be configured to receive dynamic network IP addresses using DHCP.

Set the Start IP and End IP to be outside of the panel's current IP address, and press OK to activate the DHCP server.



The built-in DHCP server automatically disables itself after 10 minutes.

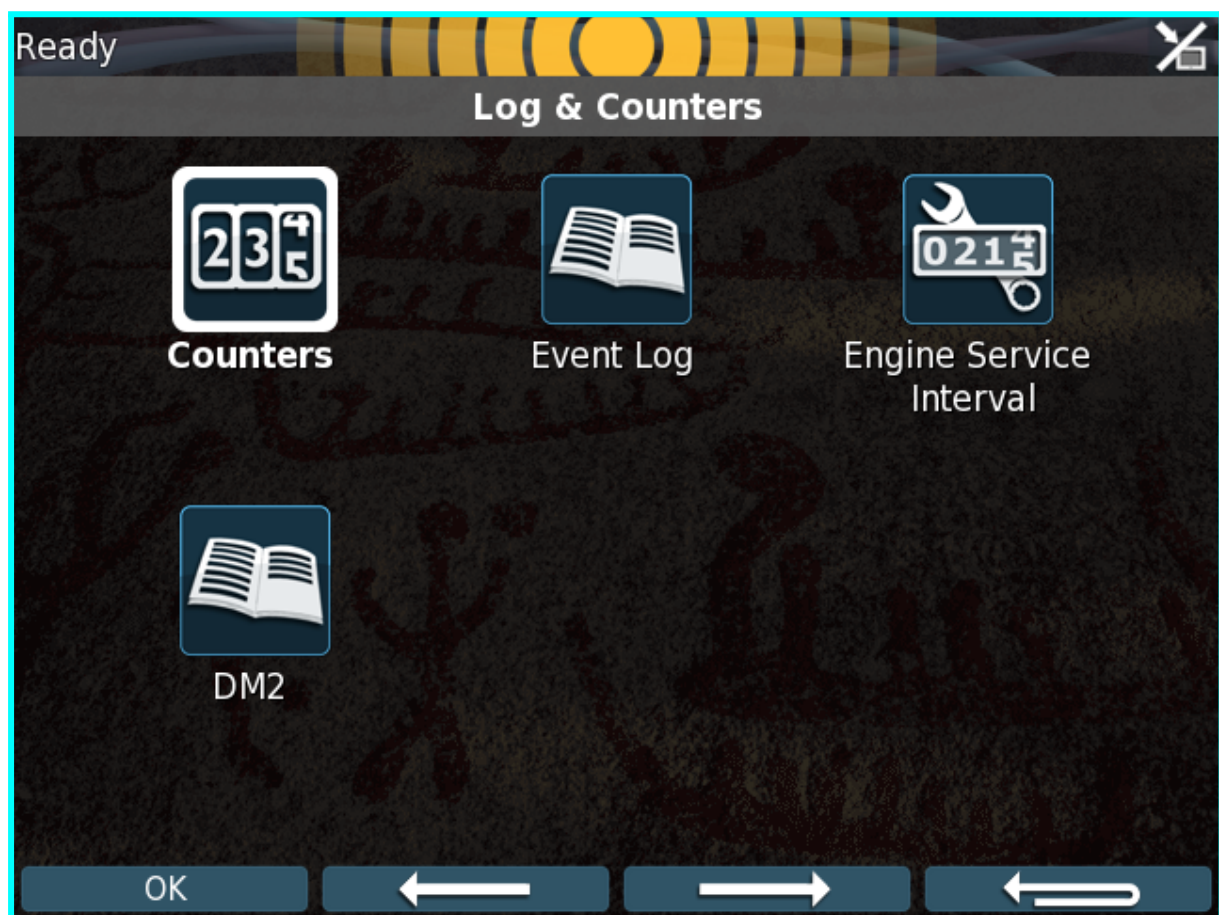
User Interface

It is possible for the operator to add up to 4 pages without having administrative privileges. Select this option to add or modify these 4 pages.

Administration

This section covers basic configuration options of the panel and requires a PIN code to access. It is not included in this manual.

Log & Counters



Counters

The counters page displays various counters, in total, since start and since reset.



The counters shown are configurable.

The **Since Start** value is automatically reset every time the engine makes a new start.

The **Since Reset** values can be reset manually using the button provided.

Event Log

All panel events are stored internally. Up to 5000 events are stored. Select this option to display the event log.

Each event contains the following information

- First appearance in alarm list
- Acknowledged (if applicable for that event)
- Removal from alarm list (if applicable for that event)

It is possible to sort the event log using the following

- By chronological order
- By severity
- By count of same event

Engine Service Interval

If engine service intervals are configured, then this page displays how many hours until the next service.

DM2

Displays historical fault codes in the J1939 ECMs.

Controls



Access certain engine related functions.

Engine Overspeed Test

Set to **Active** to activate the engine overspeed test.

This temporarily lowers the overspeed setpoint to 90% of the configured nominal speed of the engine. Start the engine to perform the test.

The test will deactivate automatically after a timeout, or when an actual overspeed (from the test) is detected.



The Overspeed Test will be transmitted to the SDU if connected.

Reset J1939 Trip Group

Press this button to transmit a J1939 trip reset over J1939.

Gear

Displays the Gear Control page.



This page is used to inspect transmission related parameters and to request gear changes. Gear changes are made available over Modbus and require a third-party equipment to actually command gear changes.



This function may not be available as it depends on how the DCU is configured.

Prelube Override

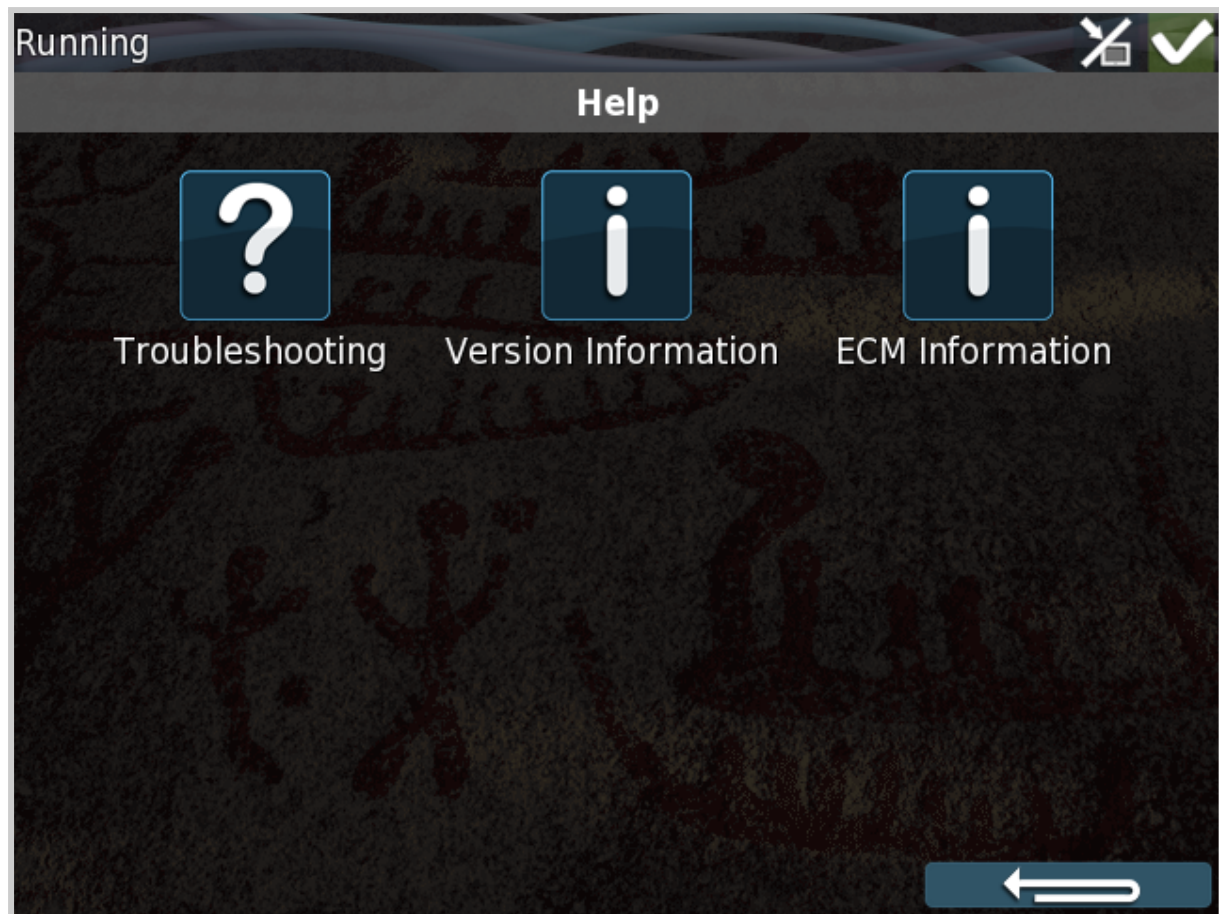
Activates or deactivates Prelube Override. When active, a start attempt will skip the prelube sequence and attempt to start the engine immediately. Prelube Override is automatically deactivated after a start attempt.



This function is only available if the DCU is configured to perform prelubing prior to engine start.

Help

Various useful information about the DCU and connected units.



Troubleshooting



DCU

Displays a comprehensive view of all sensors and interfaces, providing detailed diagnostic data.

RIOs

Useful data for connected RIO components.

J1939 Capture

Allows capture of J1939 logfiles to a USB flash drive.

Version Information

This page displays panel hardware version, software version, kernel version and also the engine ECM software version (if connected to the J1939 CANbus).

Of special interest here is the panel **IP address**, which is necessary when connecting to the panel using a PC.

ECM Information

Displays information about electronics control modules (ECMs) if the DCU is connected to an engine that supports J1939.



Not all ECMs support this function. This may be empty even if running on an engine supporting J1939.

Special Features

The functions described in this chapter are not available as standard features. They can be enabled in the field through an unlock mechanism. Please contact your Auto-Maskin representative for further information or assistance.

Sea Trial

This function allows a special mode to be activated on the DCU that enables easy data sampling of a predefined list of sensor data during a Sea Trial session or similar.

Which parameters are sampled in this process are defined in the DCU Configuration File and should be prepared beforehand. See the Configuration Manual for details on how to prepare for this.



To access the web server to reach the Sea Trial functions described below the administrator's PIN code is needed. This access is not needed to perform Sea Trial sampling but it may make it more convenient.

Inspecting Sea Trial Signals

The current value of all parameters on the Sea Trial Signal List can be inspected either from the web interface or from the Sea Trial form on the DCU.

Inspecting Sea Trial Signals from the web interface

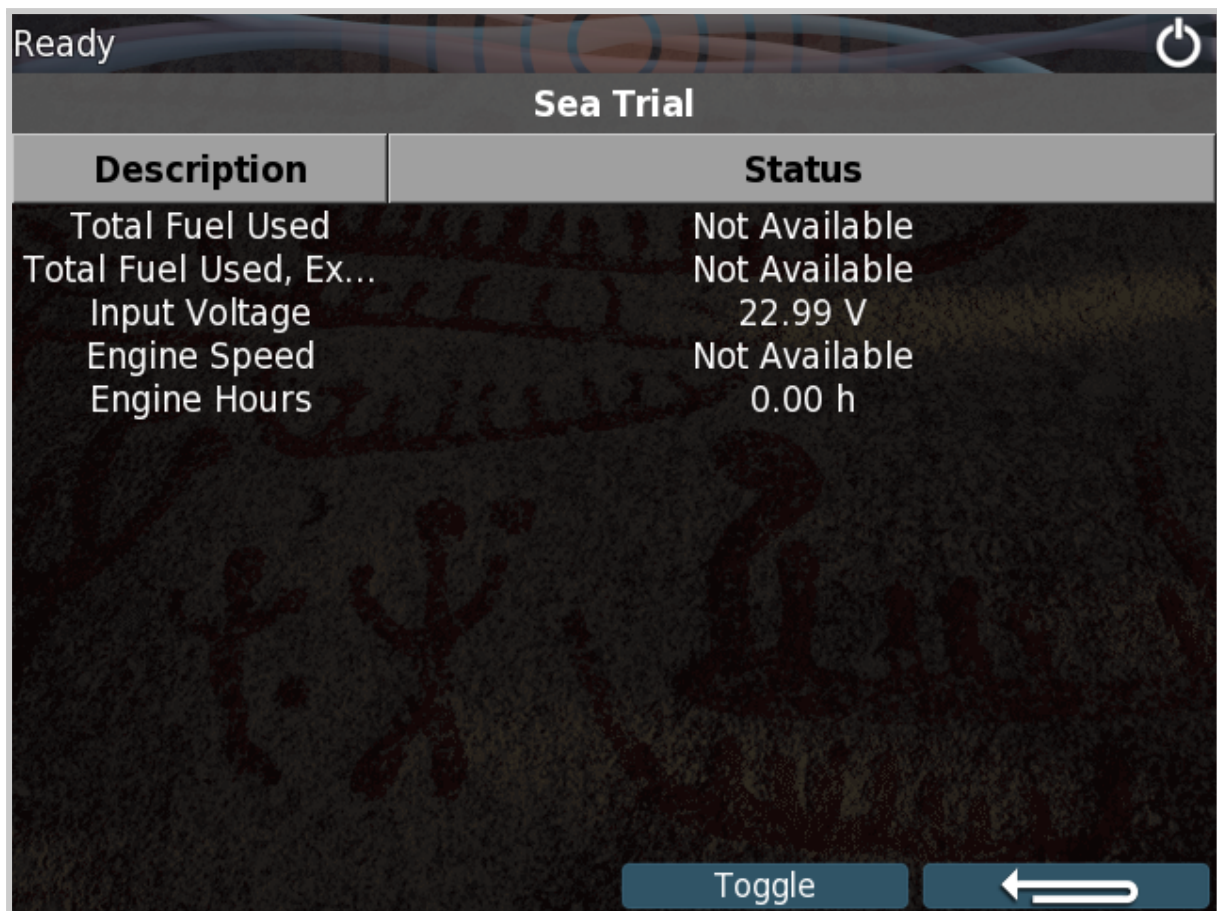
Inspect Signals

Description	Status
Total Fuel Used	Not Available
Total Fuel Used, Extended	Not Available
Input Voltage	22.99 Volt
Engine Speed	Not Available
Engine Hours	0.00 hour



home / dcu / miscellaneous / sea trial / Inspect Signals

Inspecting Sea Trial Signals from the DCU



The screenshot shows a web interface titled "Sea Trial" with a status bar at the top indicating "Ready" and a power icon. Below the title is a table with two columns: "Description" and "Status". The table contains five rows of data. At the bottom of the interface, there is a "Toggle" button and a back arrow icon.

Description	Status
Total Fuel Used	Not Available
Total Fuel Used, Ex...	Not Available
Input Voltage	22.99 V
Engine Speed	Not Available
Engine Hours	0.00 h

This form is reached from the Menu and the Sea Trial icon.

Sample Data

When the DCU is instructed to make a data sample it reads all parameters on the Sea Trial Signal List and appends the result to a log file on the USB stick. The log file is placed in the top directory on the USB stick and is named *sea_trial.log*.

There are two ways to order a sample, either from the web interface or from the DCU.

Sampling using the web interface

New Sample

Sample Name: Sample will be saved to sea_trial.log if usb-memory is connected

Sample

First sample, engine stopped

Status

Saved to USB: Yes

CSV

Headings

"Sample Name","Total Fuel Used (liter)","Total Fuel Used, Extended (liter (large))","Input Voltage (Volt)","Engine Speed (RPM)","Engine Hours (hour)"

Data

"First sample, engine stopped","Not Available","Not Available",22.99,"Not Available",0.00



home / dcu / miscellaneous / sea trial / sample

Name the sample with any text and press Submit. This appends the current data for the entire Sea Trial Signal List to the USB log file (if a USB is present in the DCU). The sampled data is also shown in the web interface for reference.

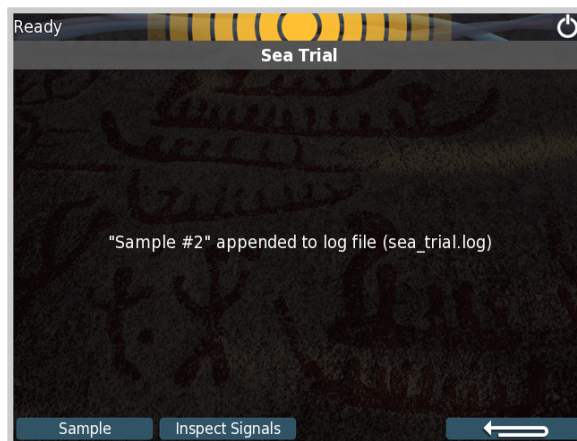


It is possible (but impractical) to use this function to sample data without using a USB flash drive. After making each sample, copy the resulting data to a spreadsheet or similar to log it manually.

Sampling using the Sea Trial form on the DCU

Navigate to the Sea Trial page from the DCU menu and click the Sample button. This assigns an automatic name to the sample and appends it to the Sea Trial log file on the USB flash drive.

The Sample button is only available if there is a USB flash drive inserted in the DCU.



Downloading or inspecting the Sea Trial Log File

To extract the log file from the DCU connect to the web interface and navigate to / home / dcu / miscellaneous / sea trial / USB. From here its is possible to download the file to a PC and also delete the current file from the USB stick if desired.



If downloading the file via the web interface you can leave the file in the USB and continue appending data samples to the file.

It is also possible to remove the USB flash drive from the DCU and insert it into a PC to access the file this way.

RP Remote Panel

The RP Remote Panels are remote panels designated to be used together with the DCU Engine Controllers Marine Pro 400 series or 200 series.

The RP Remote Panels are extension panels to the DCU Engine Controller. They will display the same information wherever they may be located. They read the configuration from the DCU it is connected to. If the DCU has a configuration change, then the RP Remote Panel will automatically adapt; no programming or configuration changes are needed.

RP Remote Panel	Maximum DCUs	Control (Start / stop)
RP 480i	8	Yes
RP 410E	8	Yes
RP 420E	2	Yes
RP 220E	2	Yes
RP 210E	1	Yes
RP 206E	2	No

The use of the RP Remote Panels is very similar to the use of the DCU Engine Controller.

First Power On

At the first power-up the user will be guided through a setup wizard. For further details and information, please see the Configuration Manual.



Make sure to follow common network configuration practice and take care when several units need to operate within the same network.

Make sure the DCU(s) are located on the same subnet.

Active Panel

In a Marine Pro system, there may be several RP Remote Panels, all controlling the same engine. Only one Remote Panel can be in control of the engine at any given time. The Remote Panel in control is denoted **Active Panel**.



If the DCU is in local mode, it is not possible to control that DCU from an RP.

Active Panel is indicated with a star symbol  in the header. This symbol is only shown when viewing a single DCU.

The header on a RP 410E and RP 480i displays a full status of its Active Panel.

	This RP is not an Active Panel over any connected DCU.
	This RP is Active Panel over at least 1, but not all, connected DCUs.
	This RP is Active Panel over all connected DCUs.

Request Active Panel

Active Panel over any DCU can be requested whenever the DCU is not in local mode. The request can either be accomplished specifically, or as a result by performing a command, such as start of engine.

Depending on configured RP panel priority, the active panel is either taken directly, or a transfer mechanism is started. This transfer mechanism will involve an acceptance / hand-over from any potential current Active Panel.



If there is only one RP in the system, it may initially not be the active panel after power-up.

Release Active Panel

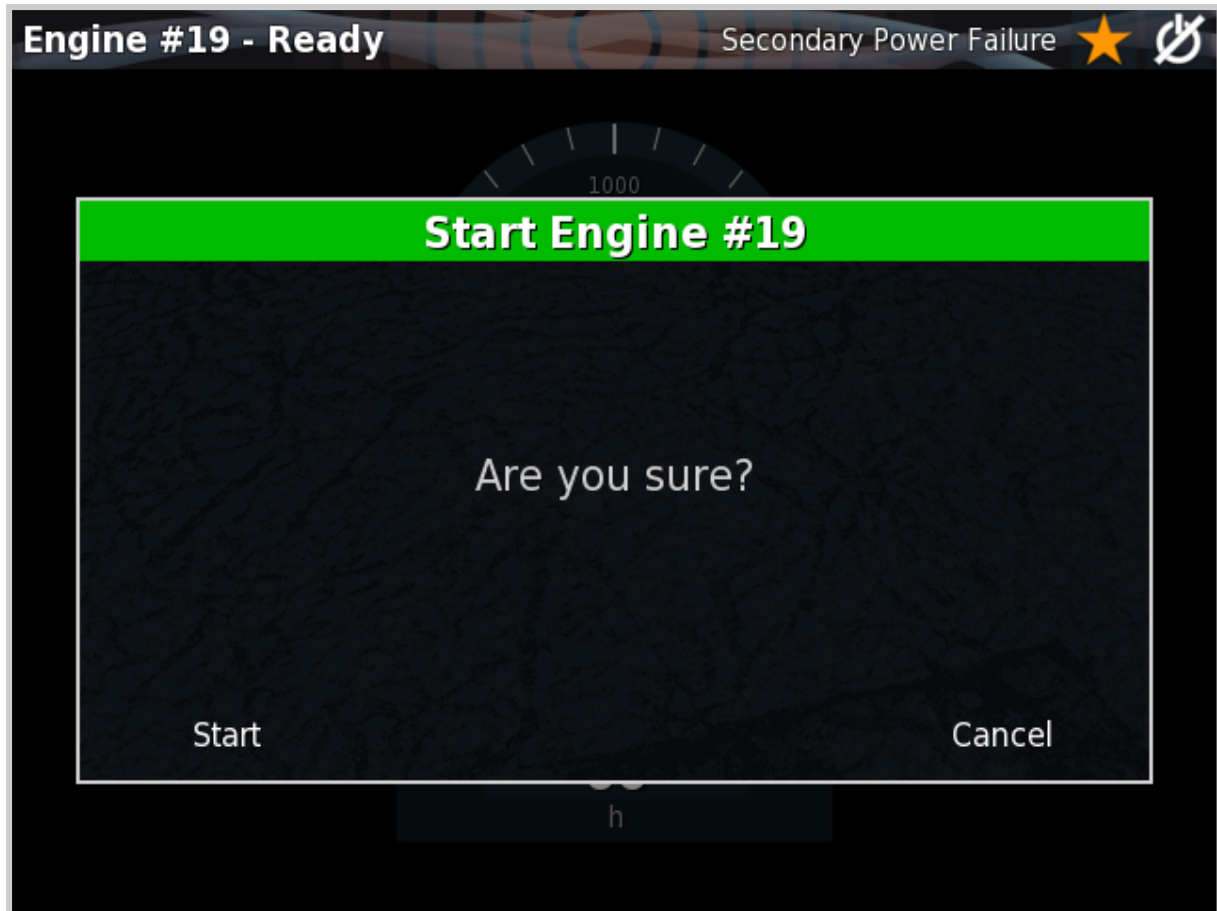
Release of Active Panel can either be accomplished specifically by releasing control, or as a result by other RPs asking for control using the Active Panel hand-over mechanism.

Start & Stop Engine

When trying to start or stop an engine using a Remote Panel, the Remote Panel needs to be in command over that DCU, Active Panel. If the RP is not already in command, a dialog appears, which initiates the command transfer, the Active Panel transfer mechanism.



Once the RP is in command over the DCU, any start or stop mechanism is working exactly as on the DCU Engine Controller.

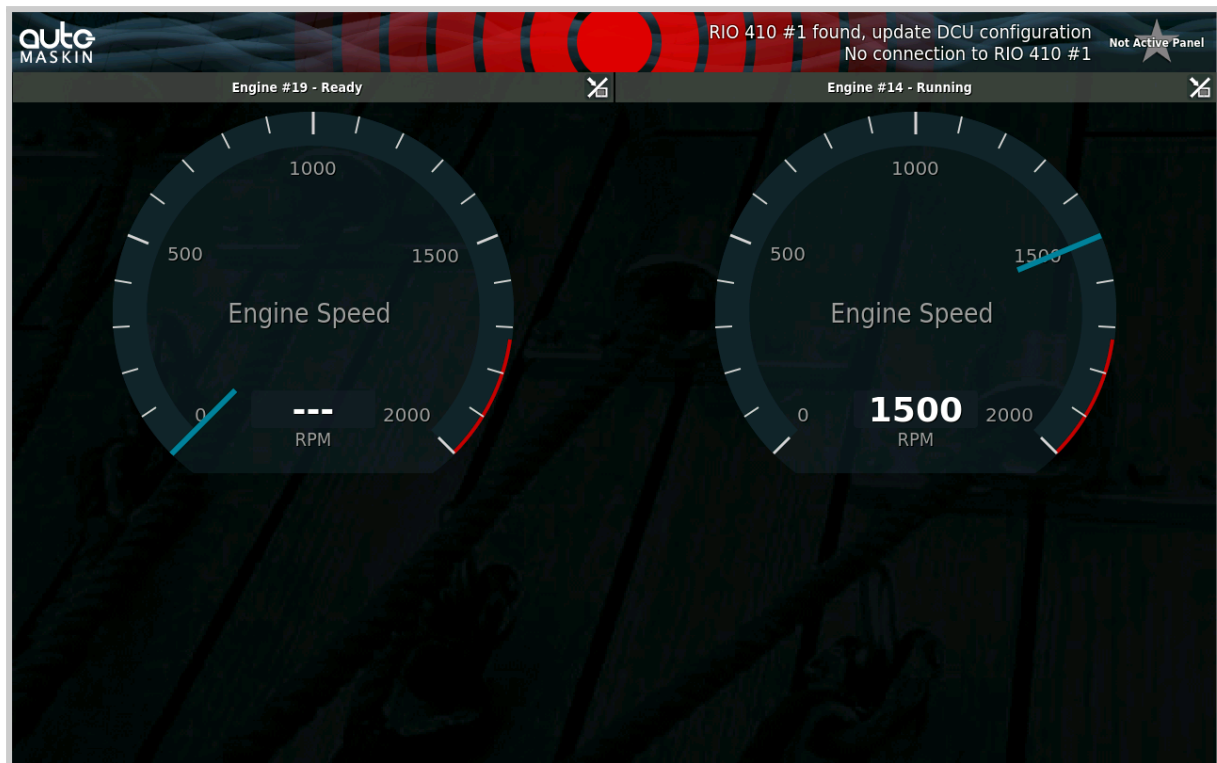


Multiple DCU Support

When an RP Remote Panel is configured for more than one DCU, the RP automatically adds support for this.

Home Page

The Home Page is automatically added when the RP is configured for more than one DCU. This page lets the operator view several engines at the same time.



Example of Home Page with two connected DCUs

Start / Stop

When the RP is configured for more than one DCU, there is a new page displayed pressing the Start or Stop buttons.

This page lets the operator select which engines, one or several, the operator desired to start / stop.



The RP can only start / stop engines for which the RP is in command (Active Panel).

RP 400E / 200E Menu

The menu is accessed by pressing the **Home** button.

Menu



Active Panel

Displays a page where the Active Panel can be monitored and controlled.

Settings

Display the Settings page.

Log & Counters

See the DCU section above for detailed information.

If there are multiple DCUs connected, select which DCU to inspect before accessing the data.

Camera

If the system is configured to use web cameras, access the video feeds here.

Backlight

Adjusts the backlight of the panel.

10%, 50%, 100%

Select fixed backlight operation.



Automatic

Select automatic backlight based on ambient light conditions.

Night Mode

Automatically turns off the screen backlight fully when there are no unacknowledged events. The screen is turned on automatically when something important happens. Acts as Automatic when the screen is turned on.

Night Theme

Select day or night mode theme.



Automatic dimming of the screen backlight is only available on RPs that feature an ambient light sensor.

Controls

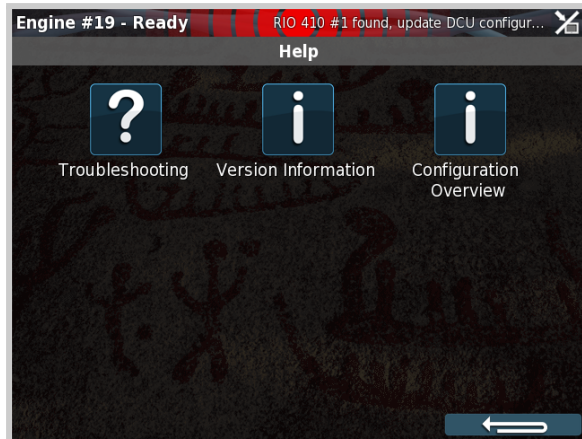
Access certain engine related functions. See the DCU menu for description of the possible functions in this form.



If the RP is connected to more than one DCU a selection screen is shown where which DCU to control is selected. Many of the functions in this page require the RP to be Active Panel to be carried out.

Help

This section provides information about the system and panel. This section also provides a Troubleshooting area where various aspects of the RP can be inspected.



Troubleshooting

Inspect all RP sensors and interfaces.

Version Information

Displays information about the RP, such as IP address and Serial Number. Also show IP addresses of connected DCUs.

Configuration Overview

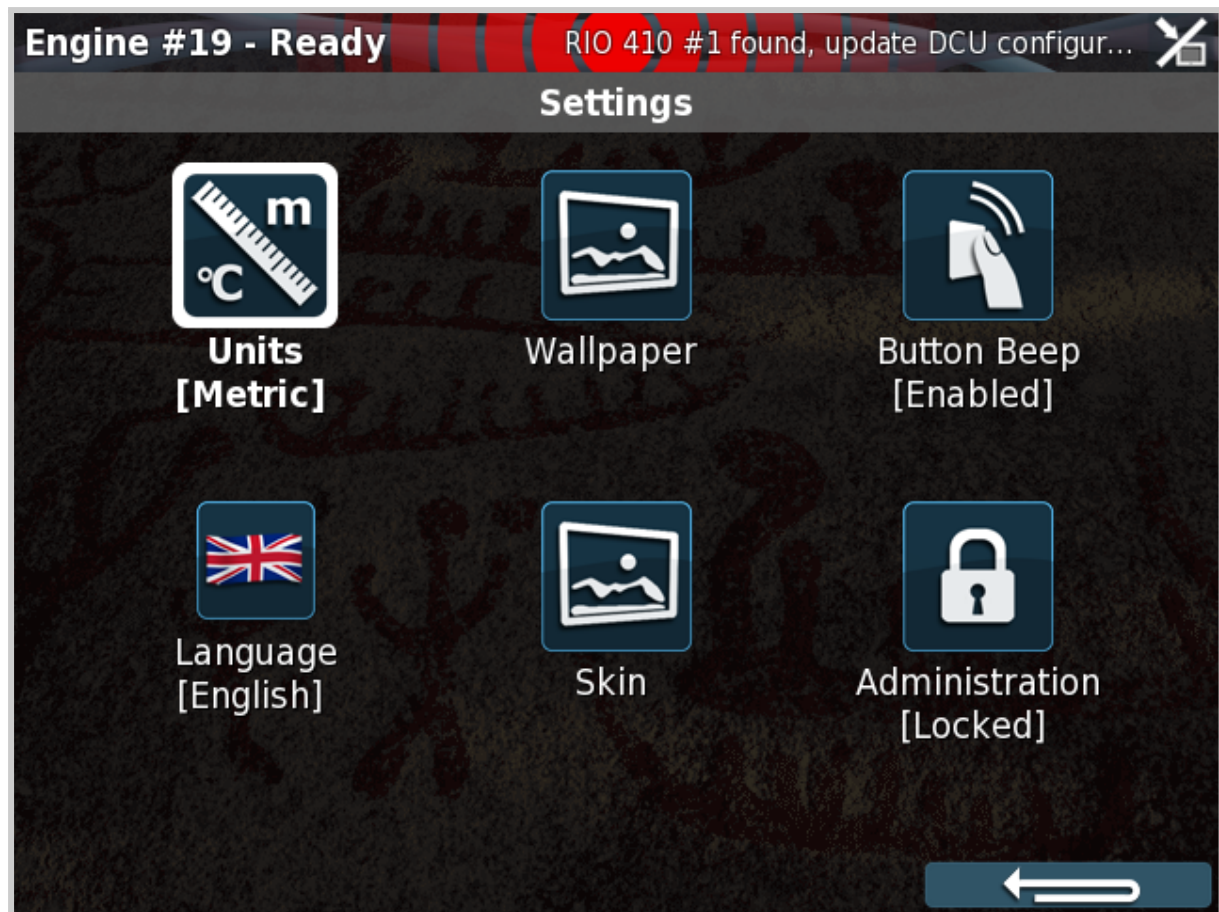
Displays basic information about this RPs configuration.



The Troubleshooting menu form contains a function called Reset PIN that can be used to reset the Administrator's PIN code in case it has been lost. This function requires assistance by Auto-Maskin to be utilized.

Settings

The Settings menu page allows the operator to access all settings accessible to the operator without having administrative privileges.



Units

Select Metric or Imperial units for this panel.

Wallpaper

Select any of the built-in wallpapers as a background for instruments, menus and popup dialogs.

Button Beep

If enabled, any button press will give an audible buzzer feedback.

Language

Select the operator language.

Skin

Select which skin to be used.

- Flat
- Classic
- Chrome

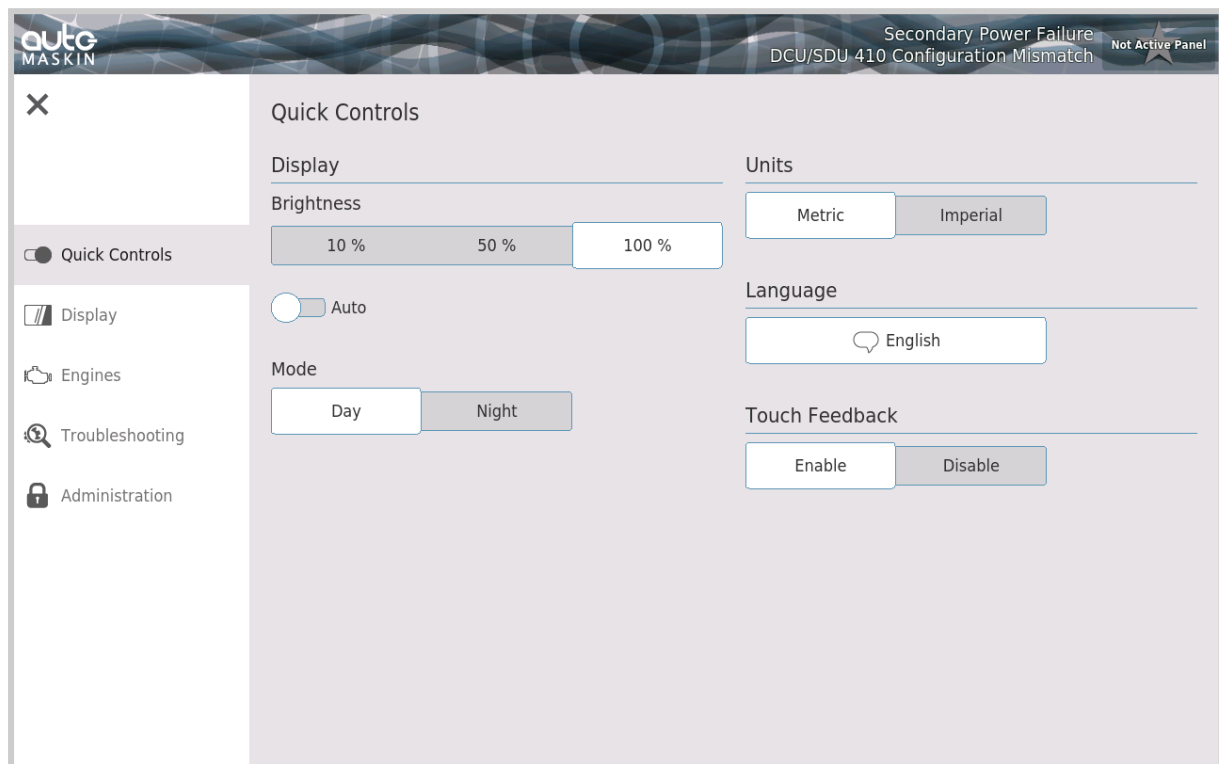
Administration

This section covers basic configuration options of the panel and requires a PIN code to access. It is not included in this manual.

RP 480i Menu

The menu is accessed by pressing the **Home** button.

Quick Controls



Display

Select the brightness of the panel backlight.



If setting brightness to 10%, this will take effect when leaving the menu.

The Auto switch activates the automatic dimming based on ambient light conditions.

The Mode selects Day or Night graphics.

Units

Select Metric or Imperial units for this panel.

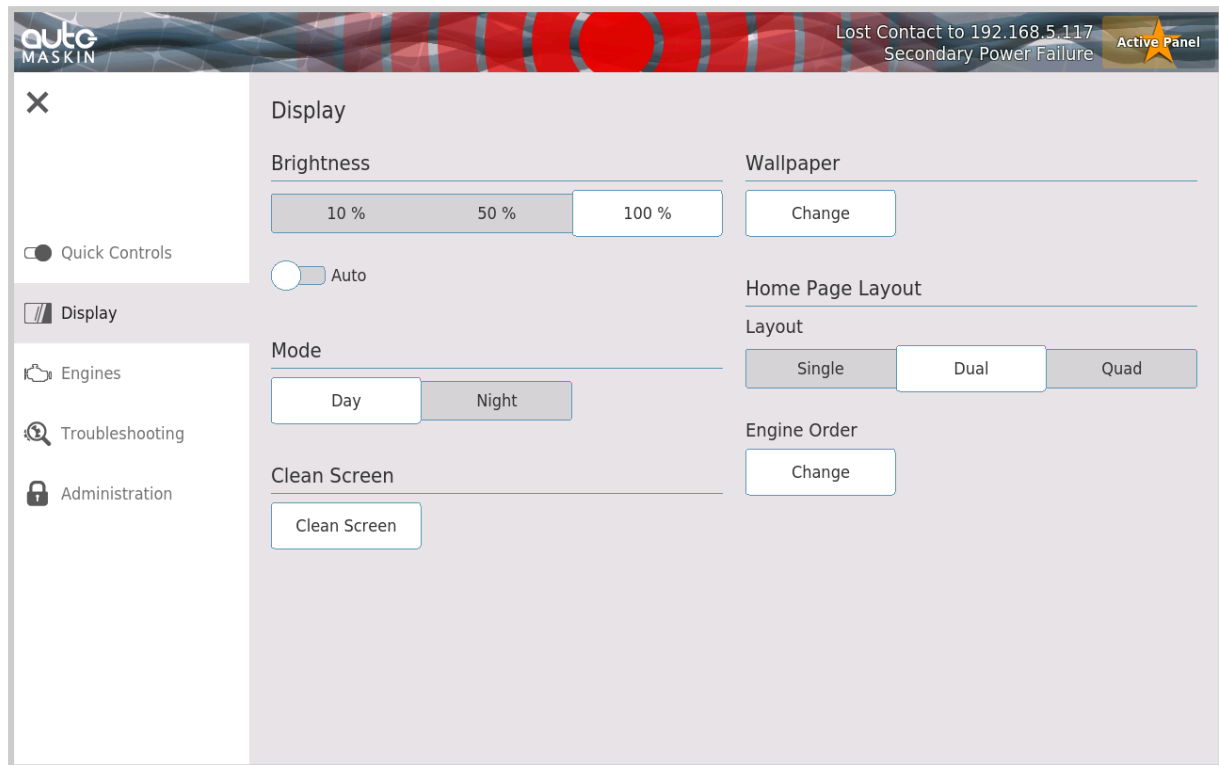
Language

Select the language for this panel.

Touch Feedback

If enabled, any button press will give an audible buzzer feedback.

Display



Brightness

Select the brightness of the panel backlight.



If setting brightness to 10%, this will take effect when leaving the menu.

The Auto switch activates the automatic dimming based on ambient light conditions.

Mode

The Mode selects Day or Night graphics

Clean Screen

Displays a screen suitable for cleaning the screen; no action will be taken if pressing buttons etc.

Wallpaper

Select background wallpaper for the instrument view.

Home Page Layout

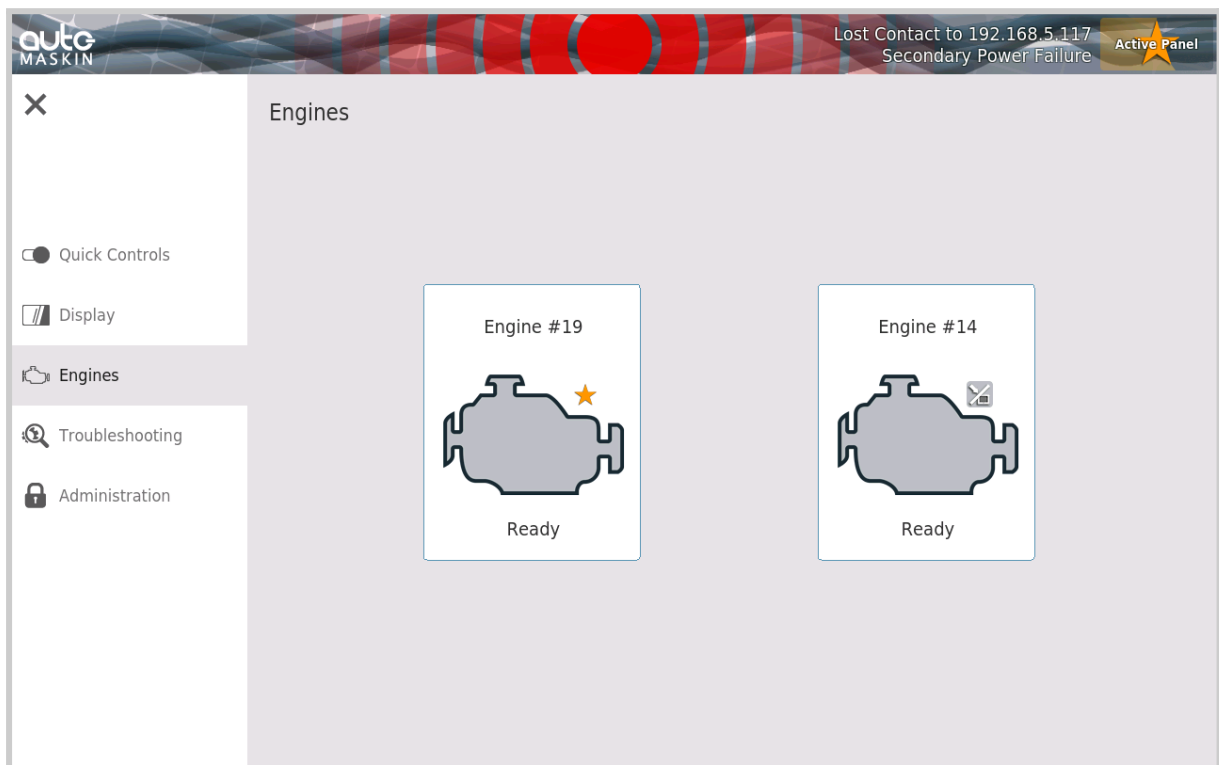
Only applicable for RPs with more than one connected DCU. The Layout selects the home page layout.

- Single: Show the first DCU in full screen
- Dual: Show the first 2 DCUs in dual view
- Quad: Show the first 4 DCUs in quad view

Additional DCUs, if any, can be seen by pressing the dedicated **Next** and **Previous** buttons on the Home Page.

The Engine Order specifies the order of which the DCUs should be presented.

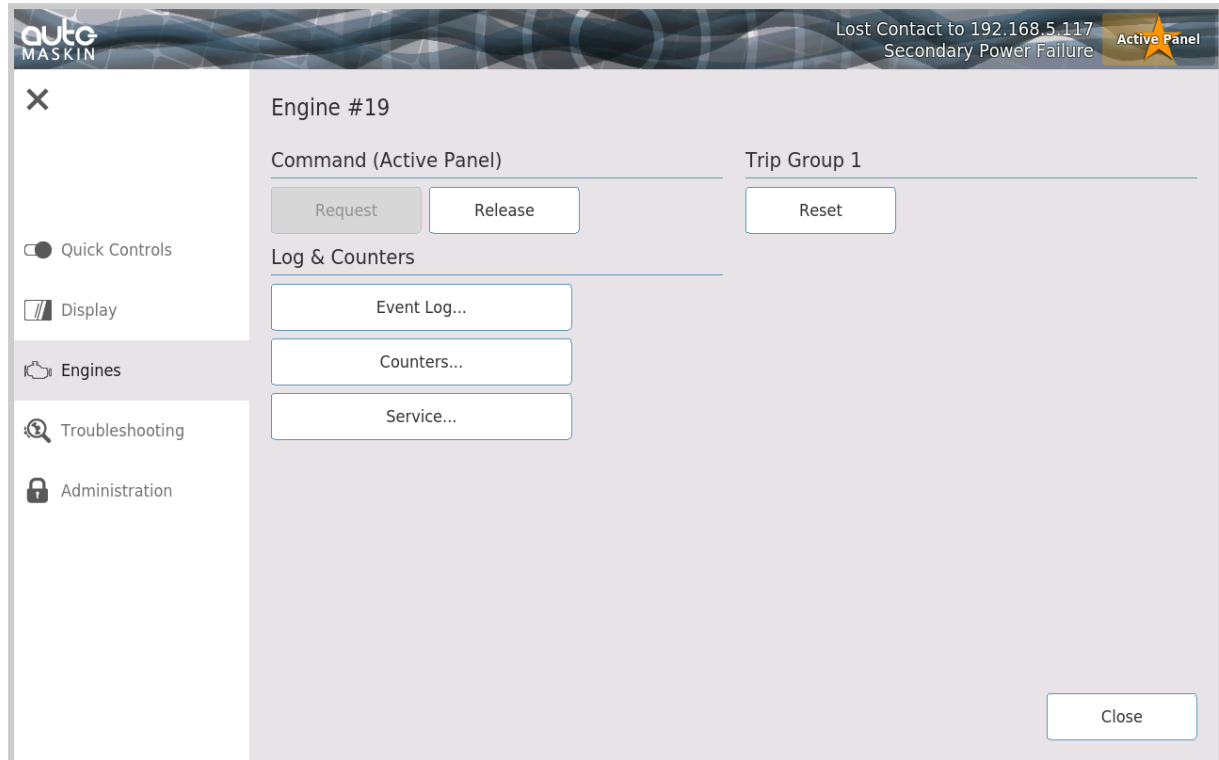
Engines



This page is only visible if the RP is configured for more than one DCU.

Select the DCU to get information about the DCU.

Single Engine



Depending on how the DCU is configured, more options may show up on this page.

Command (Active Panel)

Select Request or Release to get control over the specific DCU.

Log & Counters

Press the dedicated button to view the DCUs information of the following

- Event log
- Counters
- Service

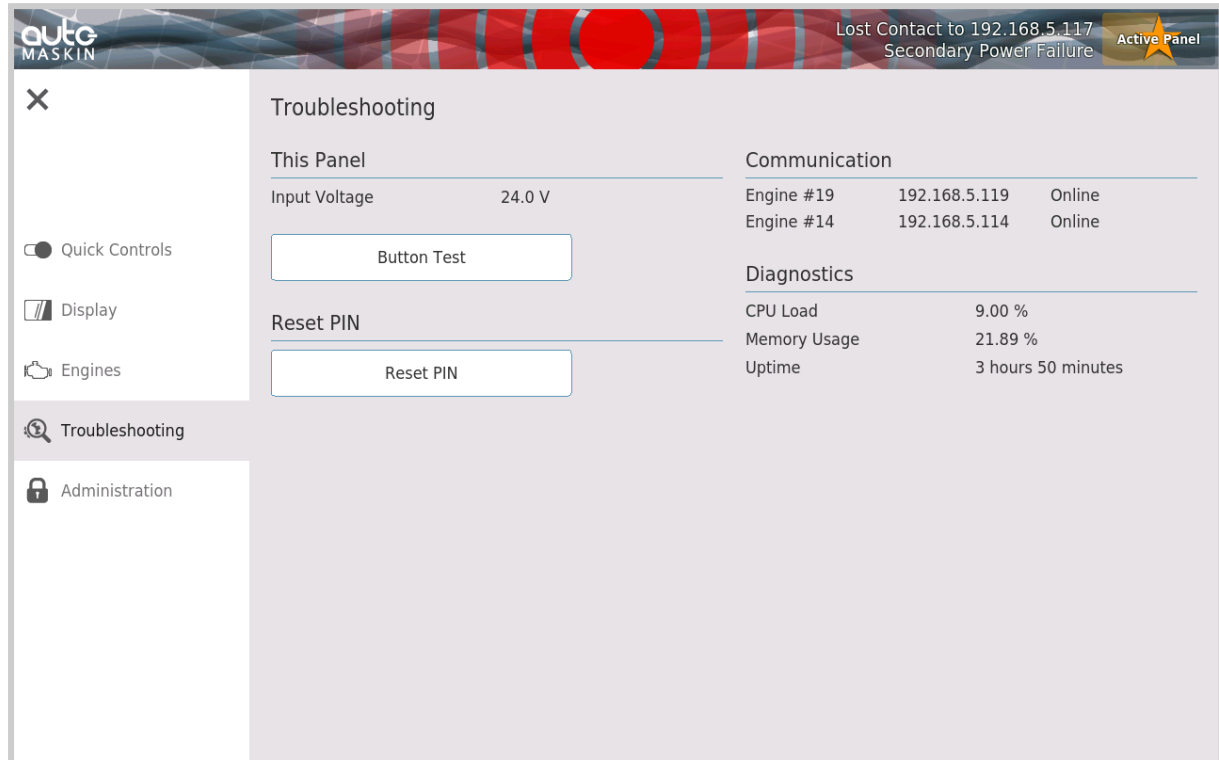
Trip Group 1

Press this button to transmit a J1939 trip reset over J1939.

Log & Counters

Access log and counter information from the DCU.

Troubleshooting



This Panel

The panel input voltage is displayed here as well as a dialog for troubleshooting the panel buttons.

Reset PIN

If the PIN is lost for whatever reason, a Reset Code can be sent to Auto-Maskin and a PIN Reset code can be used to reset the PIN to factory default.



There is no way of restoring a lost PIN code.

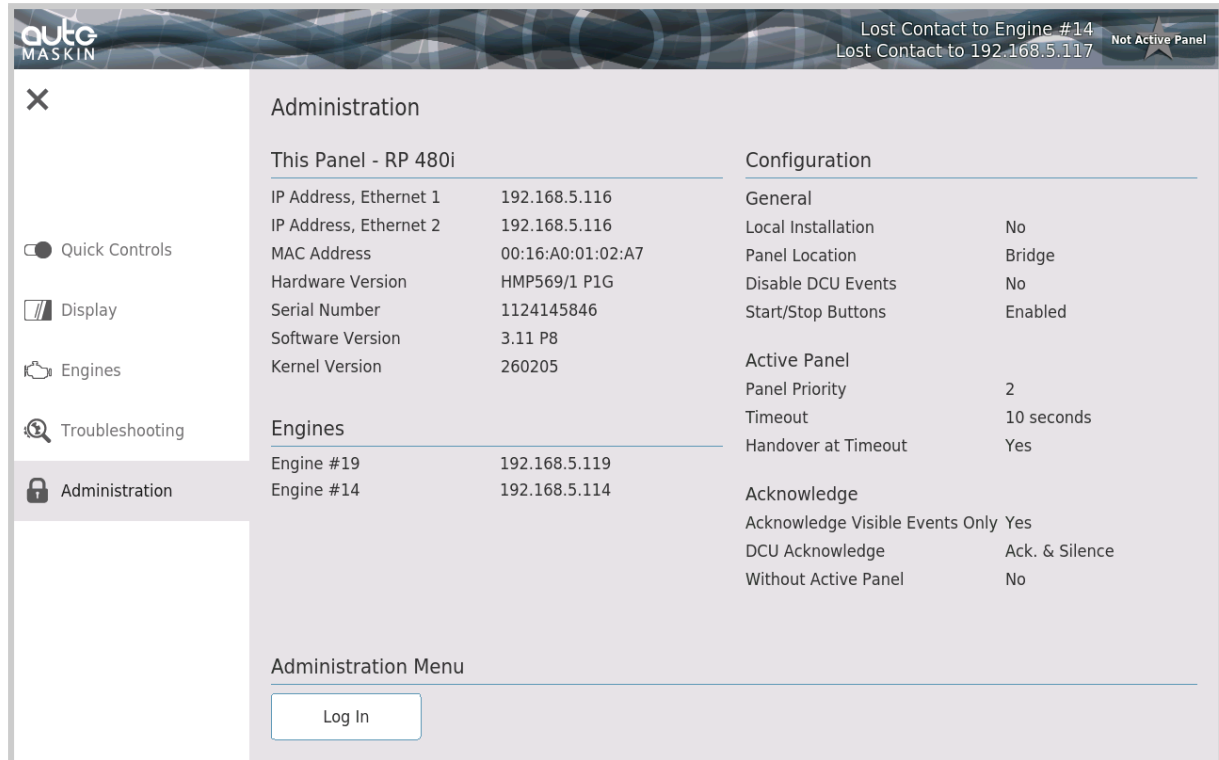
Communication

All connected DCUs and their status is shown here.

Diagnostics

Various information diagnostics are shown here.

Administration



This Panel - RP 480i

Various panel information is displayed here.

Engines

The configured DCUs, their name, and their IP address are shown here.

Configuration

Various configurations can be inspected.

Administration Menu

Press Log In to inspect the administrative part of the panel. From the administrative part of the panel configuration can be changed. For further details on this, see the Configuration Manual.

The Alarm List

The alarm list displays all events, such as warnings, alarms, in an alarm list.



- On the DCU, the alarm list is sorted in chronological order.
- On the RP, the alarm list is sorted by severity.

E-products	i-products

Indication

Whenever there is a new event in the alarm list, the panel indicates this as follows:

- Buzzer sounds
- The screen status bar flashes yellow or red



The color of the flashing status bar indicates the type of event.

- Yellow: Warning
- Red: Critical Alarm or shutdown

The red bar takes precedence over yellow.

Silence the Buzzer

Entering the alarm list will also automatically silence the buzzer.

If the buzzer sounds while in the alarm list, then the **Alarm List** button silences the buzzer and stays in the alarm list.

Alarm List Colour Coding

Alarm List Colour Coding		
Diagnostic text	Bold black text on a white background	Active, unacknowledged diagnostics
Diagnostic text	Normal black text on a white background	Active, acknowledged diagnostics
Diagnostic text	Bold white text on a grey background	Inactive, unacknowledged diagnostics
Warning text	Bold black text on a yellow background	Active, unacknowledged warning

Alarm List Colour Coding		
Warning text	Normal black text on a yellow background	Active, acknowledged warning
Warning text	Bold yellow text on a grey background	Inactive, unacknowledged warning
Alarm / load reduction / shutdown text	Bold white text on a red background	Active, unacknowledged alarm
Alarm / load reduction / shutdown text	Normal white text on a red background	Active, acknowledged alarm
Alarm / load reduction / shutdown text	Bold red text on a grey background	Inactive, unacknowledged alarm



Each event in the alarm list also contains a symbol identifying the severity of the event..

Alarm List Filtering

The alarm list can filter events in three groups as follows

- **All Alarms** (panel events and J1939 diagnostics)
- **Panel Alarms** (panel events, no J1939 diagnostics)
- **Engine Diagnostics** (J1939 diagnostics only)

In addition, on a RP Remote Panel, it is possible to filter the view based on DCU as well.

Acknowledge



Acknowledge DCU events from a RP Remote Panel may be blocked based on DCU configuration. This is indicated with a popup.

Single Event

In the alarm list, select the event to be acknowledged. Observe that the selected event line will expand to reveal additional information, if any. Then, press the **Acknowledge** button to acknowledge the selected event.

Acknowledge All

In the alarm list, press and hold the **Acknowledge** button for 1 second. This acknowledges all events.



Depending on configuration, the acknowledge all will only acknowledge visible events. If so, this is indicated with a popup.