User Manual

Version April 2025

SIMARINE PICO Super B Edition Set

User Manual SIMARINE PICO Super B Edition Set

Dear customer,

Thank you for purchasing SIMARINE PICO Super B Edition Set. We are pleased that you have chosen Super B Lithium Power B.V.

Disclaimer of liability

This manual provides detailed information necessary for the installation, use and maintenance of the SIMARINE PICO Super B Edition Set. This manual is intended for use by both the installer and the end user of the SIMARINE PICO Super B Edition Set. Only qualified and certified personnel are authorized to install and perform maintenance on the Lithium Iron Phosphate (LFP) battery. During the use of the product, user safety should always be ensured, so installers, users, service personnel and third parties can safely use the SIMARINE PICO Super B Edition Set.

Copyright Notice

Contact Information

Super B Lithium Power B.V.
Europalaan 202
7559 SC Hengelo (Ov.)
The Netherlands

Tel: +31(0)88 00 76 000
E-mail: info@Super-b.com
Web: www.super-b.com

Table of content

User Manual SIMARINE PICO Super B Edition Set **2**

Table of content **3**

1. Safety guidelines and measures **5**
1.1 General safety precautions 5
1.2 Electrical safety precautions 7
1.3 Installation precautions 7
1.4 Operational safety precautions 7
1.5 Disposal 7

2. Introduction **8**
2.1 Product description 8
2.2 Intended Use 8
2.3 Restriction on use 8
2.4 Glossary of Terminology 9
2.5 Used symbols 9

3. Product specifications **10**
3.1 Typical setup for a SIMARINE PICO Super B Edition Set 10
3.2 Product features 11

4. General Product specifications **11**
4.1 Electrical specifications 12
4.2 Mechanical specifications 13
4.3 Compliance specifications 13
4.4 Environmental specifications 13
4.5 Scope of delivery 14
4.6 Optional components 15

5. Installation **16**
5.1. General information 16
5.2. Unpacking 16
5.3. Placement of the SIMARINE PICO Super B Edition Set 16
5.4. Connecting 17
5.4.1. Connecting the power cables to the display 17
5.5. CAN-bus 17
5.5.1. General information 17
5.5.2. Connecting to the CAN interface 17

6. Operating Instructions **19**
6.1. Buttons 19
6.2. Warning- and error messages 20

6.3. Startup scan 20
6.4. Main screen 21
6.5. New battery found 22
6.6 Offline battery screen 23
6.7 Overview screen 24
6.8 Battery screen 25
6.9 Renumbering 27
6.10 Diagnostics 28
6.11 Battery Banks 32
6.12 Data Alarms 34
6.13 In Alarm Outputs 36
6.14 Barograph 37
6.15 Sleep Mode 37
6.16 Power On/Off 38

7 Maintenance 38
7.1 General information 38
7.2 Inspection 38
7.3 Cleaning 39

8 Storage 39

9 Transport 39

10 Disposal 39

11 Warranty and liability 39

12 Trademarks 40

1. Safety guidelines and measures

1.1 General safety precautions

IMPORTANT!

- Read this manual carefully before use.
- Do not remove the SIMARINE PICO Super B Edition Set from its original packaging until required for use.
- Retain the original product documentation for future reference.
- Treat the SIMARINE PICO Super B Edition Set as described in this manual.
- The SIMARINE PICO Super B Edition Set is designed for Super B Lithium Iron Phosphate (LFP) batteries. Refer to the applicable Super B battery manual that can be found on our website: www.super-b.com.
- Only the SIMARINE PICO Super B Edition Set is water and dust resistant.
- Do not expose the gateway and cables to humidity or liquids to prevent damage.
- The battery safety precautions referred to in the Super B manual should always be observed.
- Disconnect the SIMARINE PICO Super B Edition Set from the Lithium Iron Phosphate (LFP) battery when not in use.

WARNING!

- Danger of electric shock.
- Only trained experts should handle or install the SIMARINE PICO Super B Edition Set and/or related battery systems as these systems can deliver very high currents and/or voltages.
- The SIMARINE PICO Super B Edition Set shall not be used outside the electrical and mechanical specifications as specified in this manual.
- Do not disassemble, crush, puncture or shred the SIMARINE PICO Super B Edition Set.
- Never install or use a damaged SIMARINE PICO Super B Edition Set.
- Do not expose the SIMARINE PICO Super B Edition Set to heat or fire.
- Avoid dropping the device. If the device is dropped and you suspect damage, contact your reseller or Super B.
- Do not expose the LFP battery to heat or fire. Avoid exposure to direct sunlight.
- Do not place or drop tools on the battery to prevent a short circuit.
- Keep the LFP battery away from water, dust, and contamination.
- Place the LFP battery in well ventilated areas.
- Use only insulated tools.

⚠ **CAUTION!**

- Use correct cables for the SIMARINE PICO Super B Edition Set.
- When working with batteries remove watches, rings, and other metal objects.
- Place the LFP battery in well ventilated areas.

1.2 Electrical safety precautions

- Do not overload power outlets or extension cords.
- Disconnect the SIMARINE PICO Super B Edition Set from the power source before cleaning or performing maintenance.

1.3 Installation precautions

- Install the SIMARINE PICO Super B Edition Set in a stable location to prevent it from falling.
- Install the SIMARINE PICO Super B Edition Set in a visible place.
- Do not place the SIMARINE PICO Super B Edition Set near heat sources or in direct sunlight.

1.4 Operational safety precautions

- Do not operate the SIMARINE PICO Super B Edition Set with damaged cables or connectors.
- Avoid using the SIMARINE PICO Super B Edition Set in high-humidity or dusty environments.

1.5 Disposal

Dispose the SIMARINE PICO Super B Edition Set in accordance with local, state, and federal laws and regulations.

Do not mix with other (industrial) waste.

2. Introduction

2.1 Product description

This user manual is written to provide detailed information on the installation, operation, configuration, and maintenance of the SIMARINE PICO Super B Edition Set.

2.2 Intended Use

The SIMARINE PICO Super B Edition Set is a device intended to monitor up to 16 Super B devices (Super B Lithium Iron Phosphate batteries).

The SIMARINE PICO Super B Edition Set is suitable for applications in the following sectors:

- Leisure and Marine environments.
- Recreational Vehicles (RVs).

It allows you to monitor multiple voltage systems. For 12 V and 24 V systems, you can use the standard gateway included with the device. Depending on the application it can be necessary that additional components are required to ensure that the installation is compliant with the applicable regulations.

Note: Systems operating exclusively at 48 V require a high-voltage splitter.

2.3 Restriction on use

The SIMARINE PICO Super B Edition Set is **NOT** designed to be used in medical or aviation applications or other applications where a high level of safety is required. Any usage of the SIMARINE PICO Super B Edition Set outside the scope of the described applications, or for purposes not mentioned in this document, will be considered improper use and will void the product warranty.

2.4 Glossary of Terminology

LFP	Lithium Iron Phosphate (LiFeP04)
DC-bus	Load/Charger side of the main contactor(s)
SoC level	State of charge level
CAN open comm. bus	CAN bus protocol
48 V system	A system that consists of four batteries in series
24 V system	A system that consists of two batteries in series
Be in Charge Software	Software required for the Be in Charge App (desktop)
Be in Charge App	Application that can be used for configuration and monitoring
PCB	Printed Circuit Board

Table 1. Glossary of Terminology

2.5 Used symbols

The following icons will be used throughout the manual:

IMPORTANT! An important sign is used to emphasize how important something is. States precautions and restrictions that must be followed.

WARNING! A warning sign indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION! A caution sign indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

Note: A note is used to address practices not related to physical injury. It provides tips on correct use and supplementary information.

3. Product specifications

3.1 Typical setup for a SIMARINE PICO Super B Edition Set

Below figure depicts a typical setup for the SIMARINE PICO Super B Edition Set. The circuit shows the connections of the SIMARINE PICO Super B Edition Set in an installation to monitor the batteries.

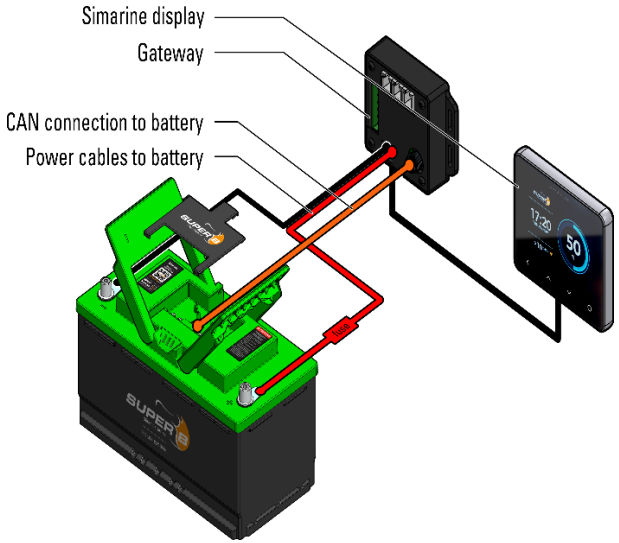


Figure 1. Typical setup

Note: Accessories such as SIMARINE PICO Super B Edition Set may consume power from the battery bank which can slowly drain the LFP batteries. Regular monitoring is advised to keep track of State of Charge (SoC).

3.2 Product features

The SIMARINE PICO Super B Edition Set[1] has the following features:

- Accurate display of battery information.
- Different languages (EN, DE, FR, ES, PL).
- Sleep mode.
- Access data and manage settings via the Be in Charge App.
- Waterproof. Backside and front IP67. Gateway IP44.
- Gorilla glass.
- User-friendly operation.
- Easy to read in sunlight.
- Accurate display of battery information.
- Wi-Fi®

4. General Product specifications

Product name:	PICO display Panel mount BI + Gateway
EAN-13	900000000460
Product name:	PICO display Standalone BI + Gateway
EAN-13	900000000470
Manufacturer:	Designed and manufactured by SIMARINE d.o.o.
Product type:	Accessories

Table 2. General product specifications

1. The SIMARINE PICO Super B Edition Set is designed and manufactured by SIMARINE d.o.o.

4.1 Electrical specifications

Operating	
Power source voltage range	6 – 35 V
Temperature range	-20 °C to + 70 °C (-4 °F to 158 °F)
Power consumption at 12 V	
Operating, Wi-Fi® On, 100% illumination	90 mA
Operating, Wi-Fi® On, 70% illumination	35 mA
Operating, Wi-Fi® On, 0% illumination	18 mA
Power Off, logger still active	5 mA
Output relays OUT1/OUT2	
Contact Rating (resistive load)	0.5 A, 125 V (AC) / 1 A, 30 V (DC)
Max. Switching Voltage	125 V (AC) / 60 V (DC)
Max. Switching Current	2 A
Max. Switching Power	62.5 W (AC) / 30 W (DC)
Display capabilities	
Current	
Range	-999.99 to + 999.99 A
Resolution	± 0.01 Ah
Voltage	
Range	0 – 75 VDC
Resolution	± 0.001 V
Amp hours (Ah)	± 0.1 Ah
SoC – Stage of Charge (0 – 100%)	± 0.01 Ah
Wi-Fi®	
Radio Frequency Band	2.4 GHz
Monitoring capabilities	
Super B devices (batteries)	Up to sixteen batteries

Table 3. Electrical specifications

Note: Wi-Fi® is a registered trademark of Wi-Fi Alliance®

4.2 Mechanical specifications

Dimensions (without connector)	Stand alone	Panel mount
Height (H)	97.50 mm (3.84 inch)	108.5 mm (4.27 inch)
Width (W)	83 mm (3.30 inch)	94 mm (3.70 inch)
Thickness (T)	10 mm (0.39 inch)	10 mm (0.39 inch)
Case material	Anodized aluminum, optically bonded display	Anodized aluminum, optically bonded display

Table 4. Mechanical specifications

4.3 Compliance specifications

Certifications	CE

Table 5. Mechanical specifications

4.4 Environmental specifications

Operating Temperature Range	-40 °C to + 150 °C
Recommended storage temperature Range	-40 °C to + 150 °C
Resolution	0.1°C / °F
Ingress protection	Backside and front: IP67. Gateway: IP44.

Table 6. Environmental specifications

4.5 Scope of delivery

The SIMARINE PICO Super B Edition Set is delivered with the following components:

1x SIMARINE PICO Super B Edition Set
1x Quick Start Guide
1x Warranty
1x Installation template
1x Gateway with black cable
2x Bracket (Panel-mount only)
1x Double sided tape (standalone only)
4x M3 Threaded bolts
4x M3 Nut
2x Screw (panel mount only)
Connector (green)
1x Power cable 1.5mtr. (red/black with green connector)
Yellow cleaning wipe (stand-alone)
Blue cleaning wipe (panel mount)

4.6 Optional components

The SIMARINE PICO Super B Edition Set can be used in combination with the following Super B products:

Suitable for:	Qty	Cable description	Part number
1 Epsilon 1 Nomia	2	CAN cable inline terminator 0.5m	420000000460
	1	CAN adapter M12 - Female to Female	420000000500
2 Epsilons 2 Nomia's	1	CAN cable inline terminator 0.5m	420000000460
	1	Can Terminator Female low profile	420000000380
	2	CAN cable 0.4m Y-split straight female-straight male female	900000000290
2 Nomada's	1	CAN cable inline terminator 0.5m	420000000460
	1	Can Terminator Female low profile	420000000380
	1	CAN Cable 0.25m angled male to angled female	900000000260
With BCI Add:	1	CAN cable 0.4m Y-split straight female-straight male female	900000000290
	1	Can Terminator Male Low profile	420000000370
Optional	1	Cable 4P M8 straight 3.5m	420000000530

Table 7. Optional components

For the use of multiple LFP batteries, an equal number of Y-split cables is required (4 Epsilons = 4 Y split cables).

In the case of Nomada LFP batteries, additional 0.25-meter CAN cables are required.

To add a BCI to a set, two additional components are needed.

5. Installation

5.1. General information

⚠ **WARNING**! Never install or use a damaged SIMARINE PICO Super B Edition Set.

⚠ **CAUTION**! Use the SIMARINE PICO Super B Edition Set within the specifications. See Chapter 4, General Product specifications.

⚠ **CAUTION**! Ensure the SIMARINE PICO Super B Edition Set is mounted according to the panel mount instructions as referred to in Section 5.3, Placement of the SIMARINE PICO Super B Edition Set, to avoid accidental dislodging of the battery.

5.2. Unpacking

Inspect the SIMARINE PICO Super B Edition Set for any signs of damage upon unpacking. If any damage is detected, please reach out to your reseller for assistance.

5.3. Placement of the SIMARINE PICO Super B Edition Set

The SIMARINE PICO Super B Edition Set should be installed in a visible place for good readability. Coordinate with the installer to ensure that cables conform to the appropriate standards, including correct isolation and colors, will be utilized. Make sure that cables, gateway, and equipment are mounted in a dry and clean location.

For installation instructions for both PICO standalone and PICO panel mount , please refer to the Quick Start Guide from SIMARINE d.o.o.

5.4. Connecting

5.4.1. Connecting the power cables to the display

To establish a proper connection, connect the black cable from the gateway to the display connector. Ensure that the connection is securely tightened.

Use the 2-pin connector to connect the display to the power source (battery). Start by connecting the small green connector to the plus 12 V GND connector on the gateway.

Connect the black cable to the negative terminal and the red cable to the positive terminal (only valid for 12 V systems). The red cable includes a 250 V fuse (Type: T1L250V). The display will turn on.

Note: Accessories such as SIMARINE Display may consume power from the battery bank which can slowly drain the batteries. Regular monitoring is advised to keep track of the State of Charge (SoC).

5.5. CAN-bus

5.5.1. General information

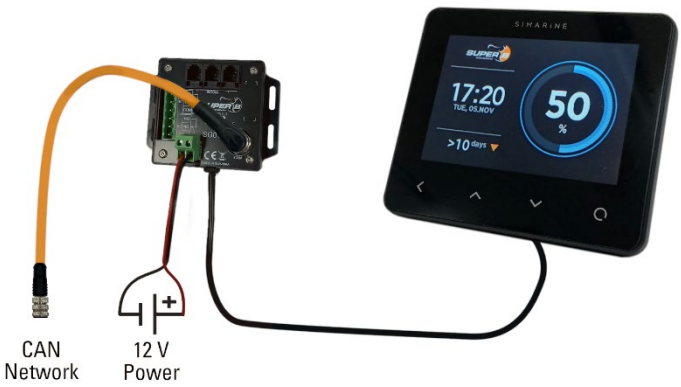
To use the SIMARINE PICO Super B Edition Set, the CAN Master bus needs to be connected to the Super B LFP batteries. More information on the CAN open bus can be found at the CiA website: www.can-cia.org. The required documentation can be found in the following CiA documents (or in a future version of these documents):

CiA 301

CiA 303_1 V1.8.0; Sections 5 (AC and DC parameters) and 7.2: (5-pin “micro” style connector).

5.5.2. Connecting to the CAN interface

The connection to the CAN interface is identical for both PICO standalone and PICO panel-mount display. See the picture below.



Picture 1. Connecting to the CAN interface

To create the CAN bus connection between the LFP batteries and the SIMARINE PICO Super B Edition Set, the following steps should be taken:

1. Prepare the Components: Ensure you have the SIMARINE PICO Super B Edition Set, the gateway module display, cable(s), and the splitters required to connect the Super B LFP batteries.

2. Connect the CAN cable with the male CAN connector on the gateway and the other end with the CAN connector on your Super B LFP battery or the slave side of your Super B BCI. We recommend contacting your installer in case the above is not clear enough. See Super B LFP battery manual for more details.

3. Verify Connections: Double-check all connections to ensure they are secure and properly seated.

4. Your battery should appear in the device list. This might take a few seconds. A pop up will appear on the screen indicating that your battery is connected.

More information related to devices, installations, connections can be found in the applicable Super B manual(s) that can be downloaded on our website www.super-b.com and on the SIMARINE website, https://simarine.net.support.

6. Operating Instructions

6.1. Buttons

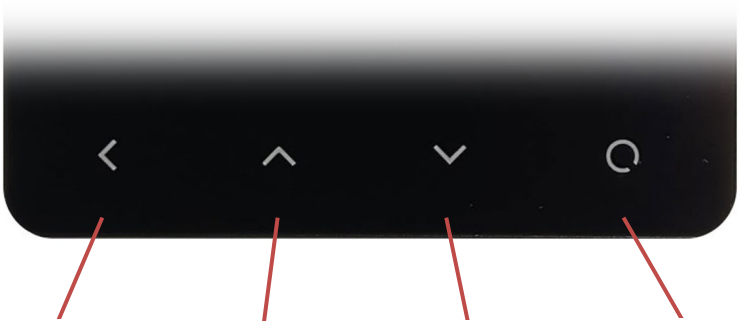
IMPORTANT!

Read this manual carefully before use.

Do not remove the SIMARINE PICO Super B Edition Set from its original packaging until required for use.

The SIMARINE PICO Super B Edition Set has four touch-sensitive buttons. In this manual, these buttons will be referred to by the names Back, Up, Down, and Confirm.

In some screens, a long press (holding the button for a second) has a different function. For example, a long press of the Back button activates sleep mode, and a long press of the Confirm button opens the settings menu.



Back
(long press: **Sleep**)

Up

Down

Confirm
(long press: **Settings**)

6.2. Warning- and error messages

Warning- and error message will appear automatically on the screen when important settings are close or outside the required specifications. For more details we refer to the battery user manual. Warning- and error message will override the main screen. When a battery is no longer in alarm state, the warning- and error message will disappear from the screen.

WARNING

ERROR

6.3. Startup scan

When the display is powered on, it will start scanning the CAN bus for Super B devices.

Picture 2. Scanning screen

Found Super B devices, such as batteries or BCI's, are listed on the left.

When the scan has reached 100%, the scanning screen will close automatically and proceed to the main screen.

Alternatively, press Confirm to close the scanning screen and proceed directly to the main screen. The startup scan will continue in the background. The main screen may not show data until the startup scan is complete. To re-enter the scanning screen from the sleep screen, press Confirm again.

6.4. Main screen

The main screen provides a convenient summary of the whole state of the Super B battery system.

Picture 3. Main screen

The most prominent feature is the State of Charge (SoC) indicator on the right. This always shows the lowest SoC of any of the connected Super-B devices.

The display shows the current time and date on the left.

When charging, it also shows an estimate of how much time it will take to charge the system completely to 100% SoC. This is indicated by a blue arrow pointing up.

When discharging, it shows an estimate of how much time there is left until the system is discharged completely to 0% SoC. This is indicated by an orange arrow pointing down. When there is no current, or very little current, it will show >10 days, meaning more than 10 days.

From the main screen, press Up or Down for more detailed information about individual Super-B devices in the system. See Section 6.2, Overview Screen.

Press Confirm to see the progress of the background scan. The display is always scanning in the background, so new batteries added to the CAN bus will be detected automatically. When the background scan has completed it will start again from the beginning. In the background scan screen, press Confirm to return to the main screen.

6.5. New battery found

When the background scan has detected one or multiple Super B products, a popup will be shown with this notification.

Picture 4. New battery found popup

The Super B devices are listed in the device list on the left.

If a battery is found that has node ID 10, the display will automatically start the renumbering procedure for that battery. See section 6.4, Renumbering.

Press Confirm to close the popup.

6.6 Offline battery screen

If a Super B LFP battery or BCI is removed from the CAN bus or will lose connection, the display will detect this and show the following popup:

Picture 5. Offline Battery popup

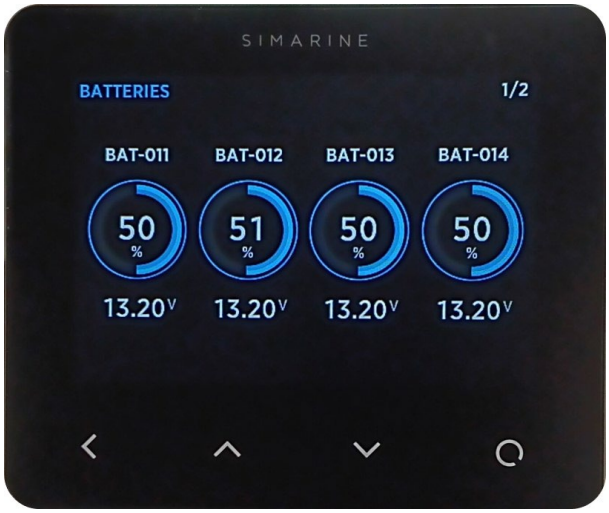
If this popup is shown when you have not removed any Super B devices from the CAN bus, there may be an issue with your system. Please inspect wiring and connections for damage or other irregularities.

Press Confirm to close the popup.

6.7 Overview screen

Pressing Up or Down in the main screen reveals the overview screen. Depending on how many Super B devices are in your system, the overview screen may contain up to four batteries. There can be up to four overview screens, for a total of sixteen connected Super B devices.

If there is only one Super B device in your system, for example a single Super B LFP battery or one BCI, the overview screen will not be shown. Instead, pressing Up or Down in the main menu will go directly to the relevant battery screen. See section 6.3, Battery Screen.
Note that a BCI managing a string of multiple batteries only counts as one Super B device.



Picture 6. Overview screen

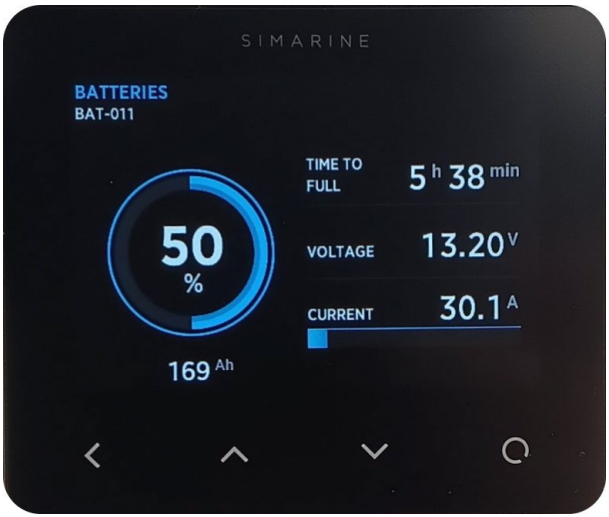
The overview screen shows the device name, the State of Charge (SoC), voltage and alarm state icon (only visible if an alarm is present) of each Super B device. If there are multiple overview screens, the page number in the top right of the screen will indicate which one is being shown.

Press Up or Down to go to the next overview screen, or to return to the main screen.

Press Confirm to see more detailed information about the individual batteries in this overview screen.

6.8 Battery screen

The battery screen shows live data for an individual battery or BCI.

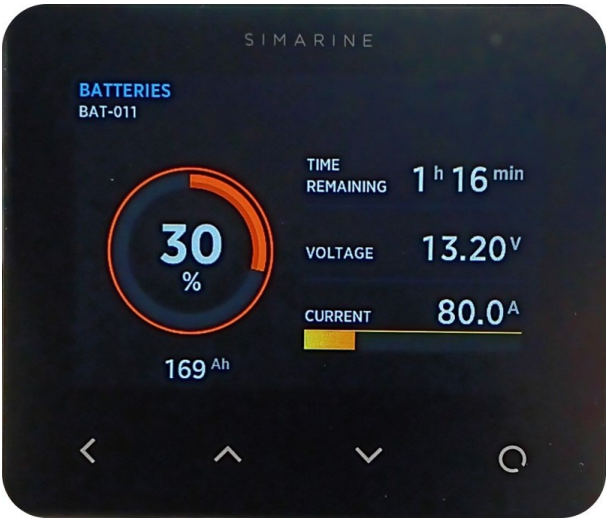


Picture 7. Battery screen (charging)

Like in the main screen, the most prominent feature is the State of Charge (SoC) indicator. Below the State of Charge (SoC) indicator, the remaining battery charge is shown.

On the right, the voltage and the current are shown.

When charging, the current will be visualized with a blue bar. The size of the bar corresponds to the amount of current. In the top right, the display shows an estimate of how much time it will take to charge the battery completely to 100% State of Charge (SoC).



Picture 8. Battery screen (discharging)

When discharging, the current will be visualized with a yellow bar. The display will show an estimate of how long the battery can sustain this same current until it is completely discharged to 0% State of Charge (SoC).

Press Back to return to the overview screen.

Press Up or Down to see the data for a different Super B device from the same overview screen.

Press Confirm to open the battery details screen. This contains detailed information, such as the battery's type, nominal capacity, serial and revision numbers, and diagnostic messages. In the battery details screen, press Back to return to the battery screen.

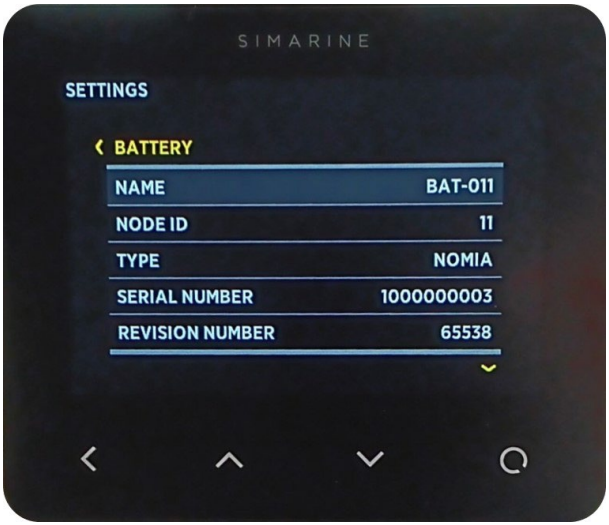
6.9 Renumbering

Each Super B LFP battery or BCI has an identification number called its 'CAN open node ID.' Each Super B device connected to the same CAN bus must have a unique node ID.

All Super B LFP batteries are configured to node ID 10 when they leave the Super B factory. When a battery with this node ID is added to the CAN bus, the display will automatically start the renumbering procedure.

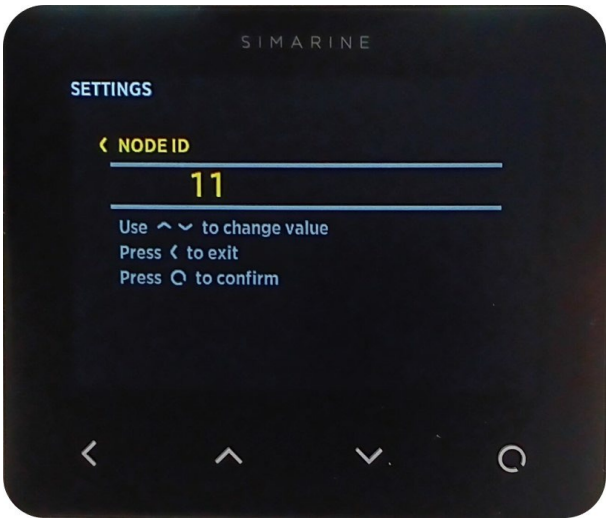
IMPORTANT! When adding multiple new batteries to the CAN bus, make sure to add them one at a time. If multiple batteries with node ID 10 are connected at the same time, the renumbering procedure might not work correctly.

You can also manually start the renumbering procedure for any Super B LFP battery or BCI. To do so, long press Confirm to open the settings menu, then navigate to DEVICES > SUPER-B DEVICES > DEVICES. Open the battery settings menu for the Super B LFP battery or BCI you want to renumber.



Picture 9. Battery settings

To renumber this battery, select NODE ID and press Confirm. This will open the renumbering screen for that battery.



Picture 10. Renumbering screen

Press Up or Down to select a new node ID. The display will automatically skip IDs that are already in use. It is not possible to give two batteries the same ID, or to set a battery back to node ID 10.

Press Confirm to set the battery to the new node ID. This might take a second.

Press Back to cancel the renumbering and return to the battery settings screen.

In the settings menus, press Back to return to the previous menu, and again to close the settings menu and return to the main screen.

6.10 Diagnostics

Each Super B LFP battery or BCI can transmit diagnostic warnings or error messages on the CAN bus. For example, a battery might send a Low Temperature warning. These messages are very useful when installing or troubleshooting a battery system. The display will detect these diagnostics messages and show a popup with this notification.

Picture 11. Warning popup

The popup shows which Super B device sent the diagnostic and what it means. An orange symbol indicates that it is a warning.

Picture 12. Error popup

A red symbol indicates that it is an error.

Press Back to go directly to the battery screen for this Super B device. More information may be available there to help you troubleshoot the issue.

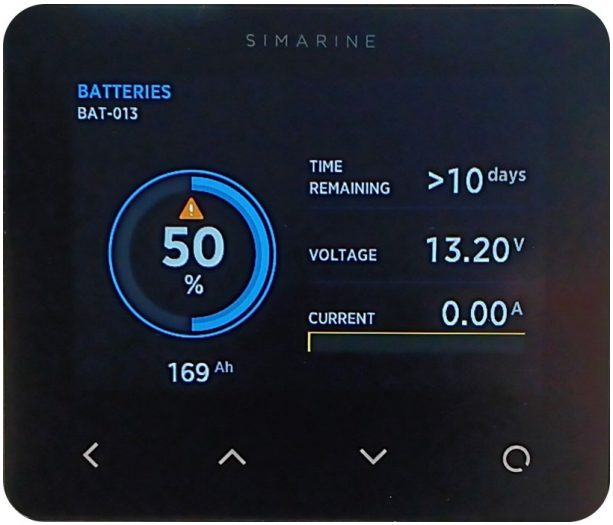
Press Confirm to close the popup. When the popup is closed, the diagnostic is not gone. The diagnostic will stay active until the root cause is resolved.

Picture 13. Main screen (warning)

A diagnostic indicator in the main screen shows that one of the connected Super B devices has an active warning.

Picture 14. Overview screen (warning)

In the overview screen, a diagnostic indicator shows which Super B device has the active warning.



Picture 15. Battery screen (warning)

In the battery screen, a diagnostic indicator shows this battery has an active warning. Press Confirm to open the battery details screen to see which diagnostics are active for this battery.

Picture 16. Battery details screen (warning)

Press Back to return to the battery screen.

6.11 Battery Banks

When multiple batteries are connected in series or in parallel, it can be helpful to display the total voltage and current instead of the individual battery data.

The display can combine multiple Super B LFP batteries into a Battery Bank. To do so, long press Confirm to open the settings menu, then navigate to DEVICES > SUPER-B DEVICES > BATTERY BANKS.

Here you can create a new battery bank or edit an existing battery bank.

Picture 17. New Bank screen

Select EDIT BATTERY BANK and press Confirm to configure how the batteries are configured.

Picture 18. Edit Battery Bank screen

In this screen the batteries can be configured as up to four in series, and up to sixteen in parallel.

⚠ **CAUTION!** Only LFP batteries of the same type may be connected to together to form a battery bank. Mixing different LFP battery types can result in performance issues, safety hazards, or damage to the system.

Press Confirm to edit a bank position. Then press Up or Down to select which battery should be in that position. Press Confirm again.

Press Up to select a parallel position or press Down to select a series position.

Continue configuring each position until the battery bank matches your actual system layout.

Press Back to close the edit battery bank screen and return to the bank screen.

Press Back again to return to the settings menu, and again to return to the main screen.

Instead of the individual batteries that comprised the bank, the display will now show them combined into one device called BANK, with the correct voltage and current according to the configured layout.

6.12 Data Alarms

It is possible to set an alarm that is raised when some configurable conditions apply. This is useful in case you want to be reminded to charge the battery, or to be notified of unusual conditions.

To configure an alarm, long press Confirm to open the settings menu. Navigate to DATA MANAGEMENT > DATA SETTINGS and select which alarm category you want to configure.

Four alarm categories are relevant to Super B devices.

- **BATTERY STATE** allows alarms to be raised when SoC limits are exceeded.
- **REMAINING TIME** allows alarms to be raised when the remaining time while discharging exceeds some limits. It is not possible to set an alarm for time to full while charging.
- **VOLTAGE** allows alarms to be raised when voltage limits are exceeded.
- **CURRENT** allows alarms to be raised when charge or discharge currents are exceeded. It is not possible to set an alarm for only charge or only discharge current, only for both.

There are also other categories, which may be relevant when additional SIMARINE© modules are connected to the display. See the SIMARINE© manuals for more information.

Alarms are configured independently for each Super-B device. Select which battery or BCI you want to configure an alarm for.
Each alarm has a **LOW** and a **HIGH** version. Select which you want to configure.

- **ALARM LOW** means the alarm is raised when the corresponding value is less than the configured limit value.
- **ALARM HIGH** means the alarm is raised when the corresponding value is greater than the configured limit value.

Each alarm can be configured using several parameters.

- **ALARM STATE** means whether the alarm is enabled or not.
- **ALARM VALUE** means the limit value that defines the trigger condition.
- **SILENT** means whether the display's internal buzzer will make an audible noise when the alarm is raised.
- **ALARM DELAY** means how long the trigger condition must be present before the alarm is raised.
- **ALARM DURATION** means how long the alarm should stay active before being automatically dismissed.
- **OUTPUT** means which relay output is switched when the alarm is raised. Select OUT1, OUT2, or Not Selected. See the section Alarm Outputs.
- **OUTPUT MODE** means how the output should be switched when the alarm is raised:
  - ON/OFF means the output should be switched ON when the alarm is raised, and OFF when the alarm becomes inactive.
  - ON means the output should be switched ON when the alarm is raised and stay ON.
  - OFF means the output should be switched OFF when the alarm is raised and stay OFF.
- **OUTPUT DELAY** means how long after the alarm should be active before the output is switched.

When the configured trigger limit for an enabled alarm is exceeded, the alarm is raised. A popup will be shown with this notification.

Picture 19. SoC alarm low popup

Each alarm popup will show some relevant data as to why the alarm was raised.

Press Back to hide the alarm popup. The alarm will stay active while the triggering condition persists, or until the configured alarm duration expires.

Press Up or Down to snooze the alarm for 5 or 30 minutes, respectively. If, after this time, the triggering condition persists and the configured alarm duration has not expired, the alarm will be raised again.

Press Confirm to dismiss the alarm. The alarm will not be raised again for 24 hours unless the triggering condition is resolved and occurs again.

From the main screen, long press Confirm to open the menu settings. Navigate to ALARMS to see which alarms are currently hidden or snoozed. Note that when no alarms are active, the ALARMS menu option is not shown.

6.13 In Alarm Outputs

The SIMARINE PICO Super B Edition Set has two configurable relays (K1 and K2), which can be enabled or disabled by data alarms. These relay outputs allow arbitrary external devices to be controlled by an alarm, such as a light, a buzzer, or even a charger.
For electrical characteristics of these relay outputs, see section 4.1, Electrical specifications.

IMPORTANT! The relay outputs are not suitable for switching 230 V AC mains power.

6.14 Barograph

The display has a built-in barometer. When enabled, the barograph screen will appear between the main screen and the overview screens.
Long press Confirm to open the settings menu, then navigate to BAROGRAPH.
Select OPERATION and configure whether the barograph screen should be enabled.

6.15 Sleep Mode

The display features a sleep mode to reduce unwanted light and preserve the user's night vision when not actively in use. This mode can be configured to activate automatically after a set period of inactivity or manually by pressing and holding the Back button.
To wake the display from sleep mode, simply press the Up, Down, or Confirm buttons.

To configure sleep mode, long press Confirm to open the settings menu, then navigate to GENERAL SETTINGS > DEVICE.
There are several settings that affect how sleep mode is configured.

- **AUTO SLEEP** Whether the display should go into sleep mode automatically after some time.
- **SLEEP AFTER** How long to wait until the display goes into sleep mode automatically.
- **SLEEP SCREEN** Which screen to show while in sleep mode.
    - **STANDARD** Show a dimmed version of the main screen.
    - **OFF** Show a dimmed version of the current screen.
    - **CLOCK** Show only a clock.
- **LEFT BUTTON** Configure what a long press of the Back button should do.
    - **SLEEP** Long pressing the Back button puts the display into sleep mode.
    - **POWER OFF** Long pressing the Back button turns the display off. Not advised; see Section 6.11, Power On/Off.
- **POWER MANAGEMENT**
    - **AUTO POWER OFF** Whether the display should turn off automatically after some time. Not advised; see Section 6.11, Power On/Off.
    - **POWER OFF DELAY** How long to wait until the display turns itself off automatically.
    - **AUTO POWER ON** This option currently has no effect.

IMPORTANT: To prevent situations where the display is accidentally turned off and cannot be turned on again, we advise that the POWER OFF and AUTO POWER OFF functionalities are not used, unless a suitable power switch is also installed. See Section 6.11,Power On/Off.

When the display goes into sleep mode, the screen brightness will be dimmed. To configure this, open the settings menu and navigate to GENERAL SETTINGS > SCREEN. When in sleep mode, the screen will be set to the MIN. BRIGHTNESS level. Select this level and press Confirm to edit.

6.16 Power On/Off

The display will always turn on automatically when power is provided to the gateway, either to the 12 V power connector or via the CAN bus connector.

The display can be turned off when not in use, as described in Section 6.10, Sleep Mode. The display can be turned on again, by pressing the Up, Down, or Confirm buttons, just like when waking up from sleep mode.

When the display is turned off, it consumes significantly less power (see Section 4.1, Electrical specifications). This can be beneficial in certain situations, such as when operating off-grid and dependent on battery power for a long time. While the display is off, the gateway will continue to monitor CAN communication with the Super B devices, so when the display is turned on again live data will be available immediately.

7 Maintenance

7.1 General information

Disconnect the SIMARINE PICO Super B Edition Set from all loads and Super B devices before performing cleaning and maintenance activities.

7.2 Inspection

Inspect for any loose and/or damaged wiring contacts, cracks, deformations, or damage of any other kind. In case of damage, replacement is needed. Do not attempt to use a damaged SIMARINE PICO Super B Edition Set. Ensure the ventilation openings are not blocked.

7.3 Cleaning

- Disconnect the SIMARINE PICO Super B Edition Set from the power source before cleaning or performing maintenance.
- Use soft, dry cloth to wipe the screen.
- Never use liquids, solvents, or abrasives to clean the SIMARINE PICO Super B Edition Set.

8 Storage

To optimize the lifespan of the SIMARINE PICO Super B Edition Set the user needs to take temperature and humidity requirements into account during storage. If these instructions are not followed, the SIMARINE PICO Super B Edition Set might be damaged and misbehave. See Section 4.1, Electrical specifications.

Note: Accessories such as the SIMARINE Display may consume power from the battery bank which can slowly drain the batteries. Regular monitoring is advised to keep track of the State of Charge (SoC). See Section 4.1, Electrical specifications for more details related to power consumption.

9 Transport

No special measures or restrictions apply to the transport and shipment of the SIMARINE PICO Super B Edition Set. If the device is sent together with Super B LFP batteries, lithium battery legislation applies. Check the Super B LFP battery manual for more details. See our website: www.super-b.com. In case of doubt contact your distributor or Super B directly.

10 Disposal

The SIMARINE PICO Super B Edition Set is classified as “Small IT waste.” The SIMARINE PICO Super B Edition Set is compliant with WEEE and RoHS.

11 Warranty and liability

No rights can be derived from this document. Any installation or use contrary to these instructions may void the warranty granted to you. Please refer to the sales agreement for warranty and other provisions applicable to your purchase. If the product is defective, please contact the dealer, reseller, or retailer that you purchased the product from. Super B’s liability for any of its products is limited to the corresponding provisions under mandatory applicable law.

12 Trademarks

The name of actual companies and products mentioned in this document may be the trademarks of their respective owners. Any rights not especially granted herein are reserved.

SUPER B
lithium batteries

For more information please contact:

Super B Lithium Power B.V.
Europalaan 202
7559 SC Hengelo (Ov.)
The Netherlands

Tel: +31 (0)88 0076 000
E-mail: info@super-b.com
www.super-b.com

CE