

Xantrex Battery SOC Gauge User Guide

http://www.xantrex.com



Xantrex Battery SOC Gauge
Model number: 881-0268-XX

⚠️ DANGER

HAZARD OF FIRE, ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

This Xantrex Battery SOC Gauge User Guide is in addition to, and incorporates by reference, the relevant product manuals for each product in the power system. After reviewing this guide you must read the relevant product manuals. Unless specified, information on safety, specifications, installation, and operation is as shown in the primary documentation received with the product. Ensure you are familiar with that information before proceeding.

Failure to follow these instructions will result in death or serious injury.

Exclusion for Documentation

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NOTE: Visit <http://www.xantrex.com>, click Products, select a Product category, select a Product, and search the Product Documents panel for a translation of the English guide, if available.

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1 Introduction

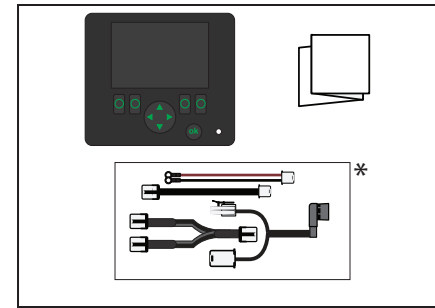
Thank you for purchasing the Xantrex Battery SOC Gauge. This user guide will help you install and use the SOC Gauge to view information about the Xantrex Battery remotely. The SOC Gauge is exclusively used for the Xantrex Battery.

⚠️ **Do not use with other batteries.**

What's in the box

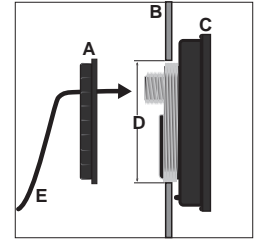
- the SOC Gauge unit
- this User guide

* the COMM harness (PN: 881-0268-02) is provided only to certain kits

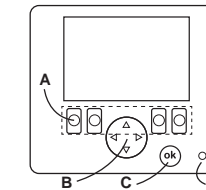


2 Installation

1. Connect the SOC Gauge unit and the 5-conductor COMM cable.
2. Choose a mounting location such as a wall panel (B) for the SOC Gauge that is within reach of the COMM cable and the Xantrex Battery.
3. When using the mounting ring (A), the diameter of the hole (D) must be 2.25 in. (57mm). The SOC Gauge's back (C) with its port must be accessible through the hole.
4. Feed the COMM cable (E) through the mounting ring (A) before securing the SOC Gauge's back with the ring.
5. Attach the COMM cable's connector to the port on the SOC Gauge.
6. Secure the SOC Gauge's back with its mounting ring.



Function Buttons and LED



A F1 | F2* | F3 | F4.** Each button is enabled and assigned a function as needed.

B Navigation buttons - press the directional arrows to move between screens and for scrolling

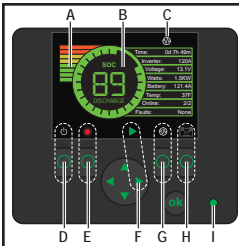
C OK button - press to return to the home screen

D LED status indicator

NOTE: Briefly pressing any function button activates backlight illumination. After 60 seconds of inactivity, backlight illumination turns off.
* When a fault is present, press F2 to display the status.
** Press and hold F4 on a desired screen to keep it on display.

3 SOC Gauge Screens

SOC Gauge Screens



Main Screen

- A** - Bars indicate either discharging (going up from center) or charging (going down from center).
- B** - SOC Summary (see below).
- C** - Indicates CAN communication to inverter is operating.
- D** - Pressing F1 with the power icon remotely turns off all battery packs connected to the display. See "Confirmation Screens".
- E** - If there is an error in the system, pressing F2 will take you to the "Fault Status Screen" on the next page.
- F** - Pressing the right arrow turns to the next screen.
- G** - Pressing F3 with the sinewave icon enables/disables the XC PRO inverter.
- H** - Pressing F4 with the battery icon brings up the "Self Heating Screens" on the next page.
- I** - Indicates that the SOC Gauge has power and a battery is communicating to it. This status LED alternates color from green to red if a fault is detected. Otherwise, it is either green or off.

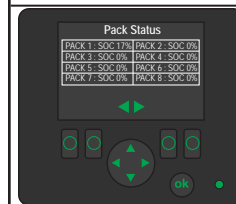
SOC Summary

- SOC:** Real-time state-of-charge (SOC) % of connected battery/ies.
- Time:** Real-time estimate of remaining time on battery/ies.
- Inverter|Charger:** State of the inverter/charger device. Shows [Inverter] if inverting, [Charger] if charging.
- Voltage:** The average terminal voltage of all the connected battery/ies.
- Watts:** The total power flowing into or from the battery/ies. Shows [+] if inverting, [-] if charging.
- Battery:** The total current flowing into or from the battery/ies. Shows [-] if being charged, [+] if discharging.
- Temp:** The average temperature of all the connected battery/ies.
- Online:** The number of battery/ies connected and how many are online.
- Faults:** Number of faults found. When a fault is detected within the batteries, a red circle appears above F2. Pressing the button will take you to the "Fault Status Screen" on the next page.



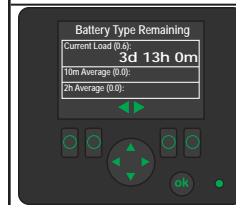
Icon Reference

Pressing the right arrow once from the main screen brings up the Icon Reference screen. This screen describes all the icons used in the SOC gauge display including a QR code that opens up the guide from a smart device.



Pack Overview

Pressing the right arrow once from the Icon Reference screen brings up this screen. This is a quick summary of all batteries, with individual State Of Charge (SOC %) shown.



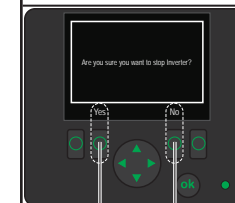
Battery Time Remaining

Pressing the right arrow once from the Pack Overview screen brings up this screen. The first line is a real-time estimate of the remaining time based upon the live current draw shown in (X.X) amps brackets from the battery. The second line is based upon the last ten minutes average current shown in (X.X) amps for remaining run time. The third line is based upon the last 2 hours average current shown in (X.X) amps for remaining run time.



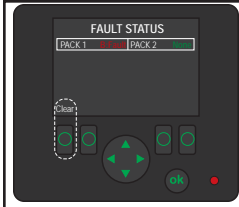
Confirmation Screens

The first is to shutdown the battery. Press F2 to initiate the shutdown. Press F3 to cancel the command.



The second is to stop inverter operation. Press F2 to stop. Press F3 to cancel the command.

Fault Status



Fault Status Screen

Fault status summary for each connected battery pack. The status LED also works in conjunction with each type of fault. Use the Function button (F1) to clear active faults.

See *Table 1* for a summary table of fault status definitions.

Table 1 Fault status definitions

LED Pattern		Code	Description
Fast	Slow		
0	Any	None	No Fault Present
1	Any	N/A	Not Currently Used
2	Any	Multi Faults	Not Currently Used
3	1	B: Booting	BMS Booting
3	2	B: Reboot	BMS Reboot
3	3	B: Cell Count	BMS Reported Cell Count
3	4	B: Com	BMS Communication
3	5	B: Failed	BMS Failed to Boot
3	6	B: Serial	BMS Serial Mismatch
3	7	B: Fault	BMS Other Fault
3	>7	B: #	Unknown BMS Fault Reported
4	1	C: Com	Cell Communication
4	2	C: OT	Cell Overtemp
4	3	C: OV	Cell Overvoltage
4	4	C: UT	Cell Undervoltage
4	5	C: UV	Cell Undervoltage
4	6	C: Override	Cell Override Attempts Exhausted
4	>6	C: #	Unknown Cell Fault Reported
5	1	P: Heat	Pack External Heating
5	2	P: In-H	Pack Internal Heating
5	3	P: LowSOC	Pack Low SOC
5	4	P: OC	Pack Overcurrent
5	5	P: OV	Pack Overvoltage
5	6	P: UV	Pack Undervoltage
5	>6	P: #	Unknown Pack Fault Reported
>5	Any	#: #	Unknown Fault Reported

Self Heating Screens



Self Heating Settings

Self heating options (current selection highlighted in blue [pointed by arrow]). All self heating options self consume battery power

Warm One Time: will allow the battery to self heat once. Subsequent cold events the battery will not self heat

Duration: Warm For Timer: allows the user to set a timer that the battery will self heat for

Always: Warm Anytime Needed: will enable self heating any time the battery is cold

Disabled: Do Not Warm: will disable battery self heating. This is recommended to avoid self consuming battery power. When this is selected, the battery will only heat when Shore Power (pin 12) or Engine Run (pin 1) are high, and there is voltage present on the DC bus.



When a Self Heating mode is selected, you can choose what temperature the battery maintains:

Discharge Warming Only: keeps the battery above -20C (-4F)

Charge Capable Warming: keeps the battery above 0C (32F)

Monitoring Hours: is where the time is set for the warm for timer option.

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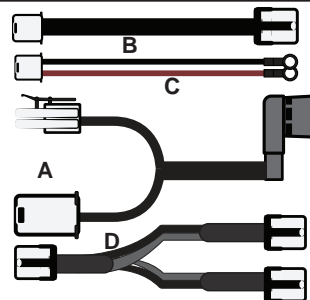
COMM Harness*

* only if applicable

Some SOC Gauge kits come with a connected COMM harness that has multiple parts. The main cable [A] has two connections attached to it to break out the RV-C communication [D] and a remote power connection [C].

The remote power connection should be connected to the common DC Bus of the Xantrex Batteries. The RV-C communication includes a Y-adaptor [D] that should be used if connecting to multiple batteries. In the Y-Cable is a 120Ω resistor, there is an extension cable as well that also has a 120Ω resistor [B]. If the SOC Gauge is connecting to more than two batteries the extension cable should be connected to the farthest battery on the RV-C Network.

⚠ Contact your dealer if you want to acquire the COMM harness or a SOC Gauge kit with the COM harness.



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Specifications

NOTE: Specifications are subject to change without prior notice.

Feature	881-0268-01
Display	2.8" color LCD 320x240 resolution
Operating voltage	8...32 VDC
Current	70 mA (at 24 V DC; 100% background illumination)
Operating temperature	-20 to 70 °C
Storage temperature	-30 to 80 °C
Ingress protection	IP65 (IP67 front face)
L x W x H	3.4 x 3.4 x 1.5 in (87.5 x 87.5 x 37.7mm)
Weight	0.4lb (165g)

For more information, scan and follow the link below.

