BATTERY MONITOR

OWNER'S MANUAL

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Introduction

The Lippert Battery Monitor works with 12 V, lead-acid batteries and allows the user to monitor battery status and condition via the Lippert OneControl app.

Additional information about this product can be obtained from lci1.com/support or by downloading the free LippertNOW app. The app is available on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.

For information on the assembly or individual components of this product, please visit:
https://support.lci1.com/electronics/

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury if not performed safely and within the parameters set forth in this manual.

⚠WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

Preparation

Battery Monitor Location

The Battery Monitor should be installed on a wall inside of the unit, in the basement, the pass-through, or another dry area with easy access to the battery cables.

Download OneControl

To use Battery Monitor, download the OneControl app.

1. Search for "OneControl" in the appropriate app store.
   A. For iOS users (Apple, iPhone, iPad): search for "OneControl" in the Apple App Store.
   B. For Droid users (Android): search for "OneControl" in GooglePlay.

NOTE: The QR codes below can be scanned to go directly to the app within the appropriate app store.

OneControl in the AppStore

OneControl in GooglePlay

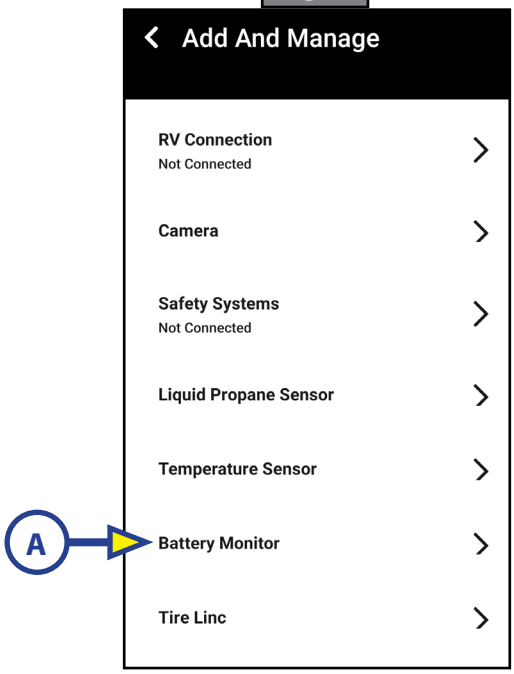
Installation

1. Download the OneControl app.
2. Open OneControl app and follow the prompts for initial set up of the app.
3. Tap the '+' icon (Fig. 1A) on the OneControl app home screen.

Fig. 1

4. Tap "Battery Monitor" from the list of devices to add or manage (Fig. 2A).

Fig. 2



5. Tap "Scan with Camera" (Fig. 3A) and scan the QR code on the Battery Monitor (Fig. 4A).

Fig. 3

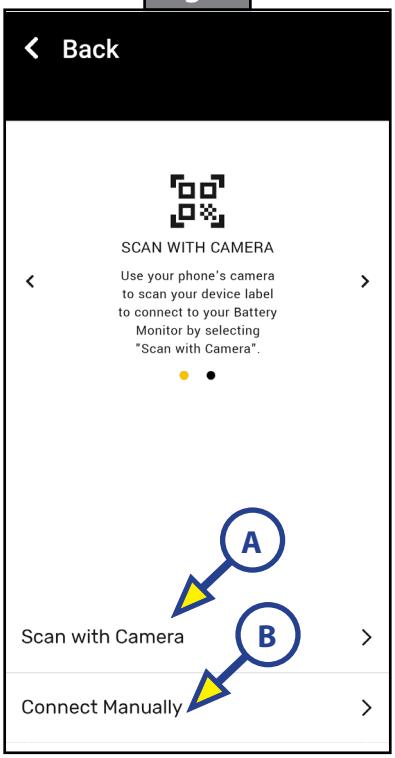
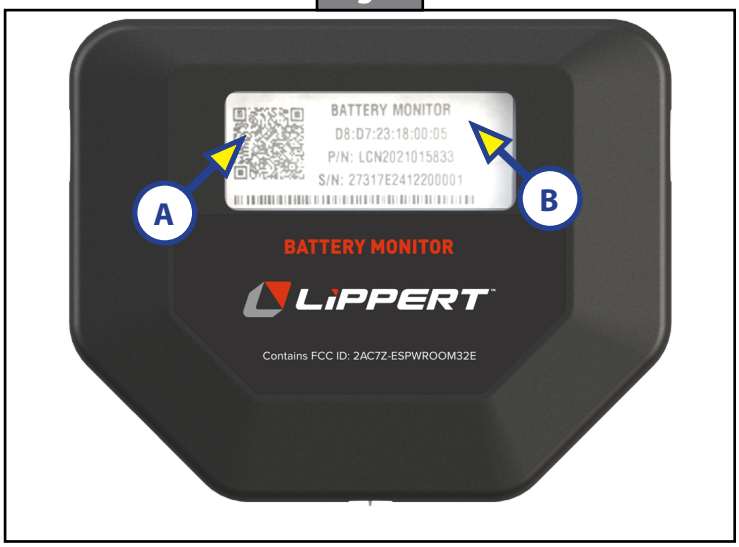


Fig. 4

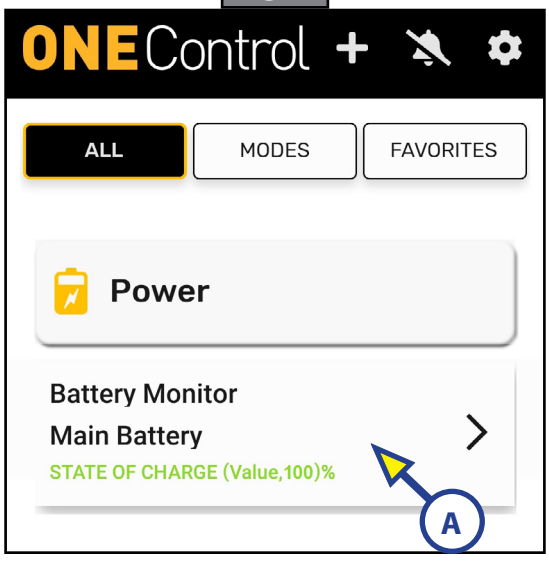


NOTE: The Battery Monitor can be connected to the OneControl app manually. Tap "Connect Manually" (Fig. 3B) and enter the MAC Address (Fig. 4B) for manual entry (Fig. 5).

Fig. 5

6. Once connected, the Battery Monitor will be shown on the home screen (Fig. 6A).

Fig. 6



Operation

Lead acid batteries last the longest when cycled. Regularly discharge the battery below 70% state-of-charge and charge above 90%. Fully discharging a battery can damage it and lead to a shorter expected life. Keeping a battery fully charged can also decrease the useful life of the battery. When the unit is idle for longer than a day or two, physically disconnect the battery from the unit. This will prevent small electrical loads from discharging the battery while the unit is not being used or is in storage.

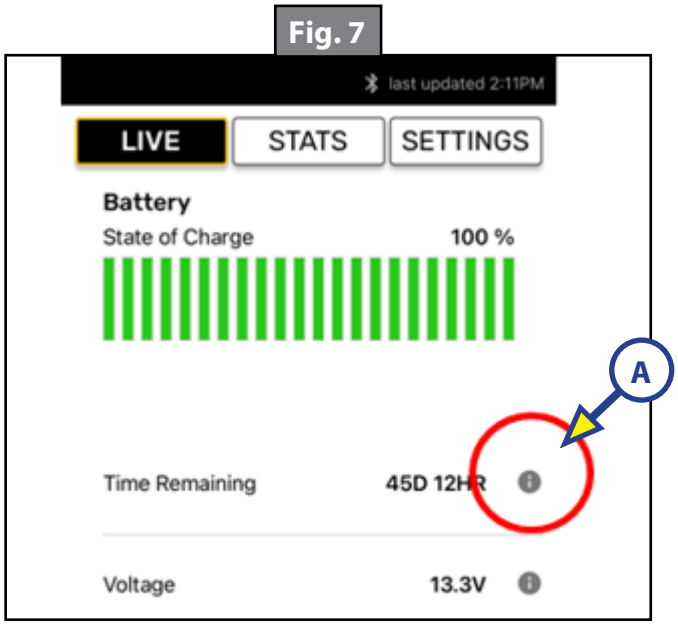
State of charge is the relative remaining capacity of the battery. It is determined by referencing voltage and by adding or subtracting the amount of charge entering or leaving the battery. For lead acid batteries, the monitor associates 12.9 V to 100% when the battery is not loaded and 12.1 V to 0%.

Once the OneControl app is installed and linked to the Battery Monitor, the two can work together to provide essential information about the unit's battery to the user via the app.

Information Icons

For more information on features in the Battery Monitor section of the OneControl App, tap the information icons (Fig. 7A).

Fig. 7



Setting the Battery Name

Tap the name of the battery that the battery monitor is monitoring.

1. Tap the "SETTINGS" tab on the home screen (Fig. 8A) and tap "Battery Name."
2. Tap name from the list of available battery names and tap "APPLY" (Fig. 9A).

NOTE: Names and naming do not affect any calculations.

Once set, the name will appear on the OneControl home screen.

Fig. 8

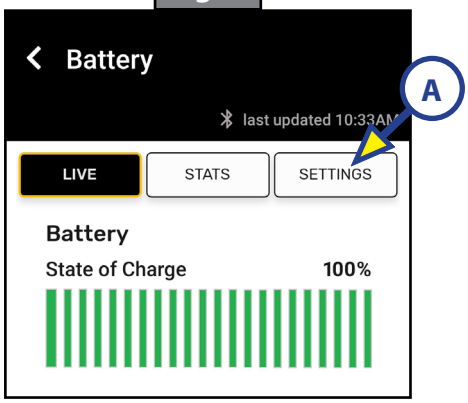
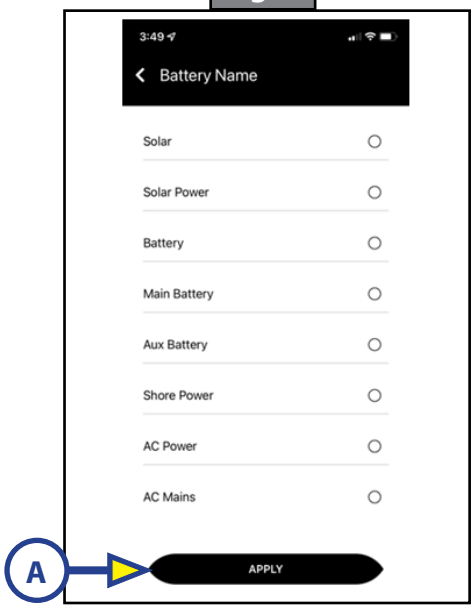


Fig. 9



Setting the Battery Capacity

In order for the battery monitor to properly calculate state of charge and time remaining, the battery's capacity must be entered in ampere hours.

NOTE: Ampere hours can often be found on the battery as a number followed by Ah.

1. Tap the "SETTINGS" tab on the home screen (Fig. 10A).
2. Tap "Amp Hour Capacity" (Fig. 10B).
3. Tap the "Ah" input box (Fig. 11A).
4. Enter the Amp Hour Capacity and tap "APPLY" (Fig. 12).

Fig. 10

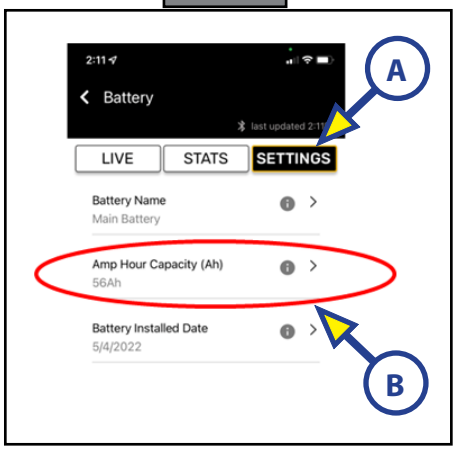


Fig. 11

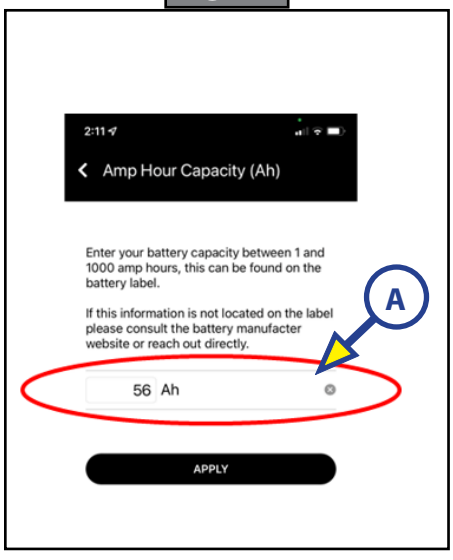
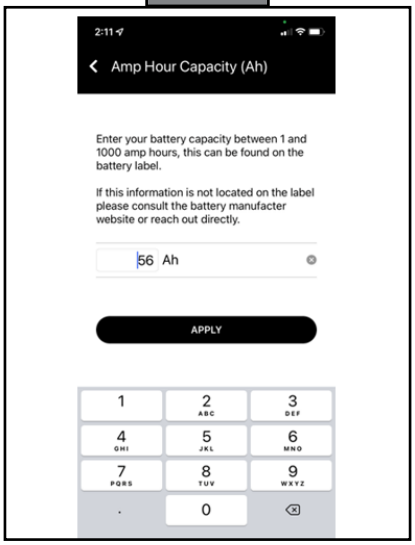


Fig. 12



Setting the Battery Install Date

The battery monitor will store the date the battery was installed.

1. From the settings screen, tap "Battery Install Date" (Fig. 13A).
2. Use the date picker to tap the new install date (Fig. 14A) (highlighted in purple, date shown as example.)

Fig. 13

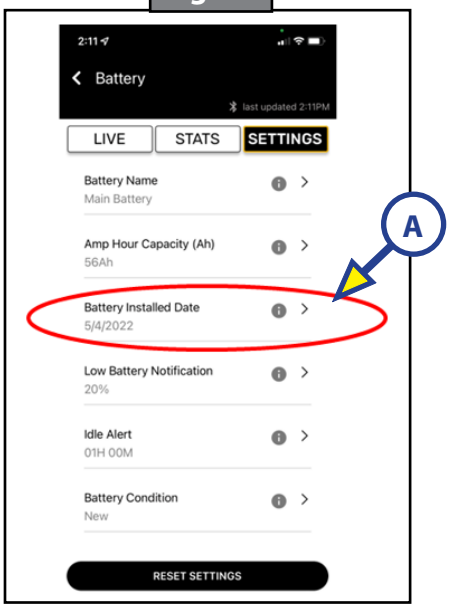
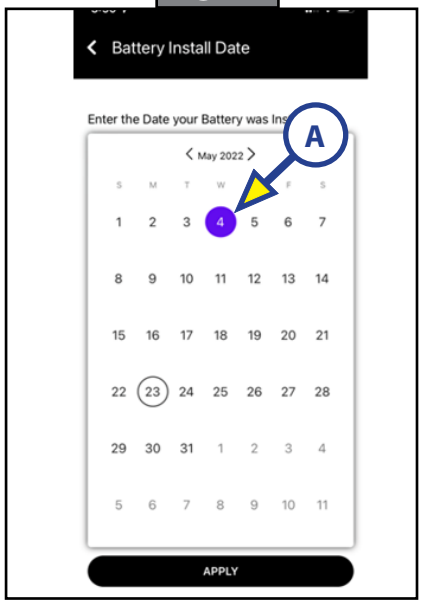


Fig. 14



Setting a Low Battery Alert

1. From the settings screen, tap "Low Battery Notification" (Fig. 15A).
2. Move the slider (Fig. 16A) to tap a state of charge at which you will receive an alert.

NOTE: Alerts will be received when device is communicating with the unit.

Fig. 15

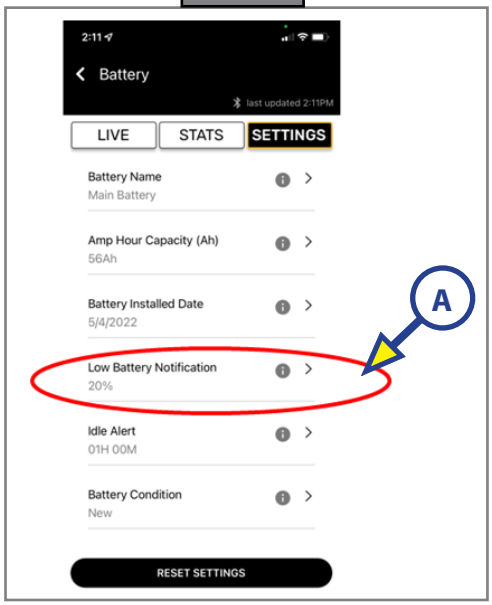
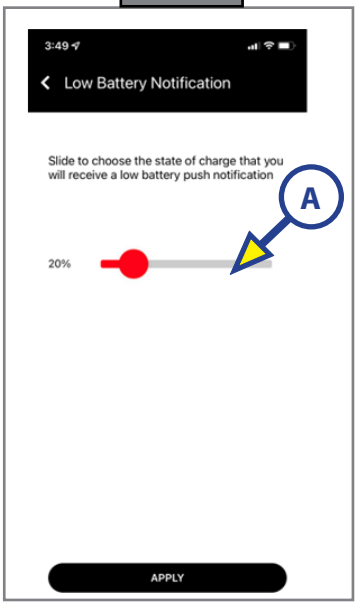


Fig. 16



Setting an Idle Alert

An idle alert reminds users to disconnect the unit when not in use, to avoid slowly losing battery power.

NOTE: An idle alert will only be received when the device is communicating with the unit.

1. On the setting screen, tap "Idle Alert" (Fig. 17A).
2. Move the slider (Fig. 18A) to adjust the alert time.

Fig. 17

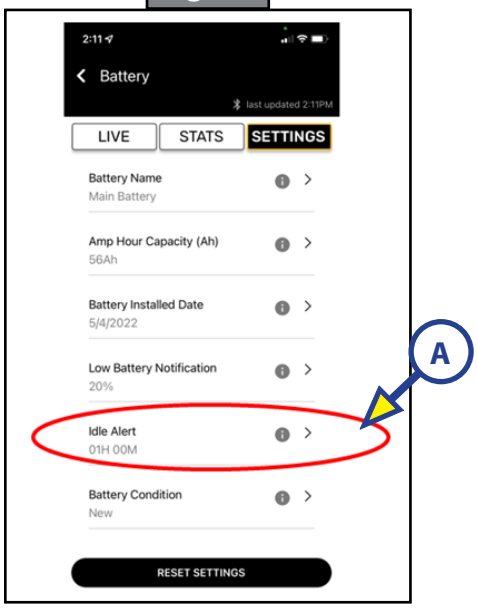
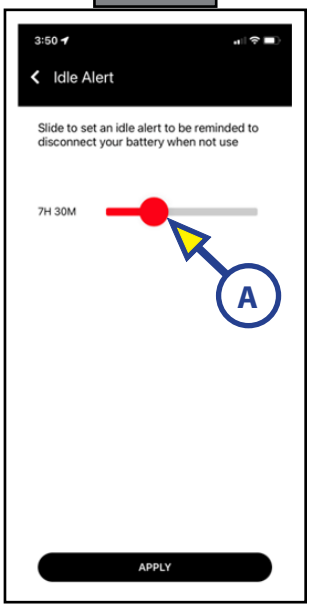


Fig. 18



Setting Battery Condition

The battery condition is used in the state of charge calculation.

1. To set it, tap "Battery Condition" from the settings menu (Fig. 19A).
2. Tap the condition that best matches the battery (Fig. 20).

Fig. 19

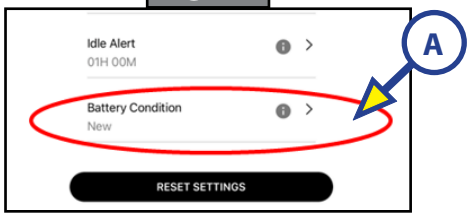
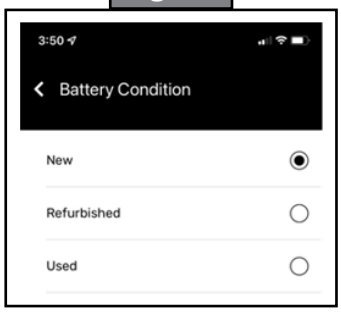


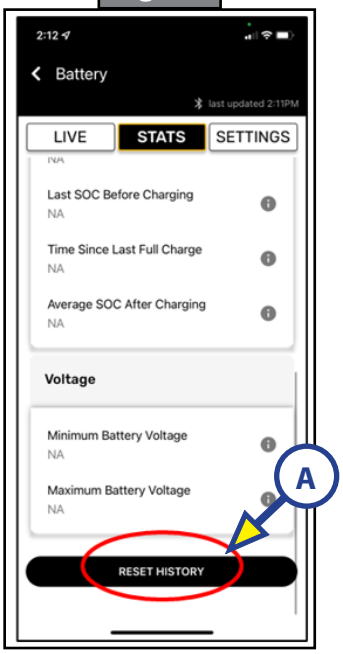
Fig. 20



Statistics

The battery monitor tracks statistics about battery use. At any point, the statistics can be reset by scrolling down and tapping "Reset History" at the bottom of the screen (Fig. 21A).

Fig. 21



Maintenance

Battery Storage

When storing a battery, disconnect it completely from the unit. The battery monitor itself draws 150 mA when connected.

Replacing a Battery

NOTE: This device is intended for use with 12 V lead acid batteries. Using a different battery will result in inaccurate calculations for state of charge and failure to operate correctly.

A baseline for the stage of charge must be determined before the battery monitor reports a state of charge. The baseline can only be established when battery is neither charging nor discharging. If the state of charge is not displayed, ensure the battery monitor is connected to the battery, and ensure there are no other loads being used by the battery. It may take 15 minutes for the battery monitor to create the baseline state of charge. The Battery Monitor only needs to create a baseline once with a battery.

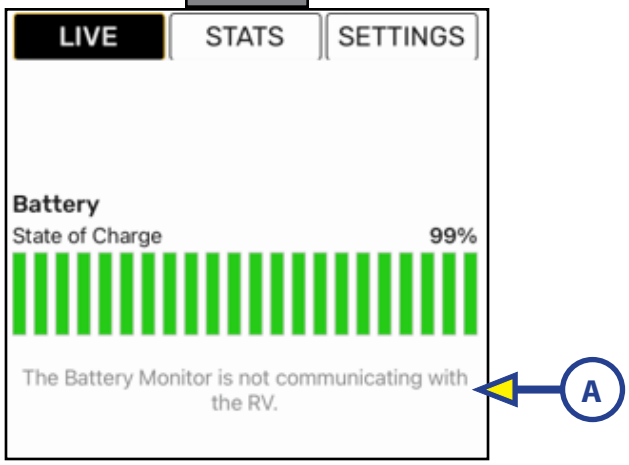
Troubleshooting

Notifications

When the Battery Monitor is not communicating with the unit, notifications (Fig. 22A) will be received.

NOTE: The information display will be the last information that was transmitted to OneControl before losing communication.

Fig. 22



Troubleshooting Table

What is Happening	Why?	What Should Be Done?
Battery Monitor not appearing in OneControl.	OneControl/smart device not connected to the Battery Monitor.	Check that Bluetooth is enabled in the smart device settings to see/communicate with OneControl.
	Battery Monitor is not receiving power.	• Make sure Battery Monitor has power. • Make sure wiring has not been obstructed.

Notes

Please recycle all obsolete materials.

For all concerns or questions, please contact Lippert
Ph: 432-LIPPERT (432-547-7378) | Web: lippert.com | Email: customerservice@lci1.com

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