



Mobility Scooters

for hire sale service

Instructions : How to start charging a flat LEMS Battery.

Background

Ensure the overload switch is in the ON position.

If there is no indication of power on the LEMS screen when the key is turned on, then the battery has flattened to the point that the BMS (Battery Management System) of the battery has switched off permanently.

This happens in two stages.

1. When the battery voltage drops to 52V and stays below 52V, the BMS turns off to protect the battery from further discharge and possible long term damage. If this is the case the battery can be recharged.
2. When the battery voltage drops to 48V, the BMS will turn off permanently, and cannot be turned on, and the battery cannot be recharged by the charger. This is because the battery could be defective, and must not be recharged. However, this is not the norm, and usually it is possible to recharge the battery, but you will not be able to recharge the battery with your charger.

In this case, the battery will be required to be removed from the LEMS and returned together with the charger to Ronica Trade, who will dismantle, inspect the cells, and if feasible, recharge the cells to above 52V, reassemble, and recharge the battery. If successful there is a 250.00 fee. If not successful, no fee is charged.

Let us hope the battery is somewhere between 48V and 52V

This is the most usual case, as following the BMS shutting off, further battery power loss is negligible.

How to start charging a flat LEMS Battery GUIDE

Step 1: Pre-Diagnosis Troubleshooting: Check your CHARGER and your 240V Wall Socket

- a) First, test the charger: Plug the charger into a 240V wall socket (do NOT plug charger into the LEMS), and switch on the 240V supply. The light on the charger should switch on to indicate that the charger will operate and that power is at the charger.

NOTE: *Different chargers have different light colours and patterns, but in general a green light will flash at a slow rate (1x/sec). We have just proved the charger is operable.*

If no light turns on, either there is no power at the 240V wall socket, so check, **or the charger is faulty. You need to have a WORKING charger to complete the rest of this GUIDE.**

Once you have ensured your charger is working:

- b) Remove the charger from the 240V socket and take it to your LEMS
- c) Plug the 60V C13 charger plug into the LEMS battery charging socket
- d) Connect the charger to a 240V power supply, you most likely will need an extension cord.

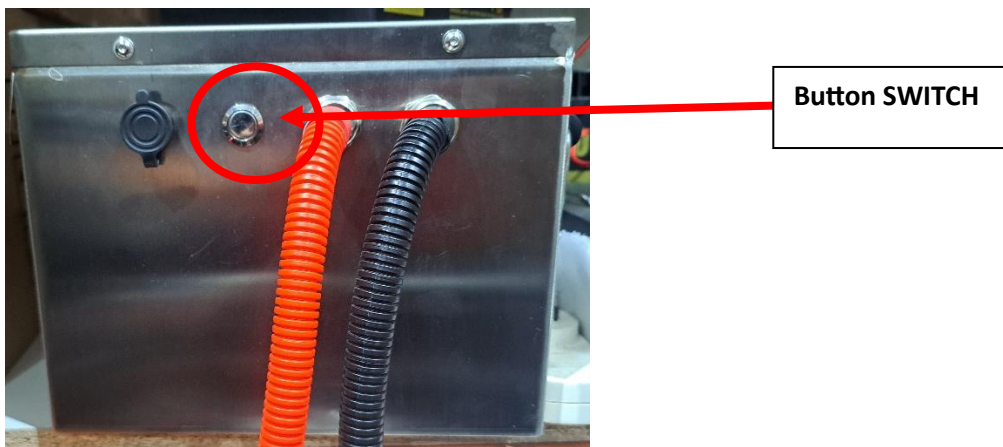
Make sure the extension cord connection or the charger cannot get wet from rain, place the connection and charger under the LEMS.

Do not place the charger inside the LEMS.

- e) At this stage if you turn on the charger it will not charge the LEMS battery because the BMS is turned off.

Step 2: This is the process of recharging the battery:

- a) With the charger connected to the 240V supply, turned OFF, and the 60V C13 plug connected to the LEMS, turn on the 240V supply. The charger light will begin to flash.
- b) To access the battery, remove the battery cover, underneath the rear seat. **Press in the button switch on the side of the LEMS battery, (pic below) and hold in for about 10 seconds until you hear a beep sound.** The BMS has just turned on providing the voltage of the battery is between 48V and 52V. It is not a loud beep, so there must be quiet, and someone have good hearing. On hearing the beep, release the button switch otherwise in another 5-10 seconds you will turn the BMS off.



- c) After a few seconds the charger should begin to charge the LEMS battery and the charger light will be a steady red colour.
- d) When the battery is full, the charger will switch off and the light will be a steady green colour.
- e) Replace the battery cover under the rear seat.

If at any time the charger red light flashes at a fast rate (2x/sec), the charger has detected a problem with the battery and it will not begin to charge the battery.

NOTE:

It is important, when charging any battery, especially with large capacity chargers, that the charger is connected to the battery first, and then the 240V supply power is turned on. The reasons are technical, but to have the 240V power on the charger before you plug in the C13 plug into the LEMS battery plug, can cause damage to the charger and/or the BMS of the battery.