

LB-1000 Battery Charger/Discharger – Calibration Manual

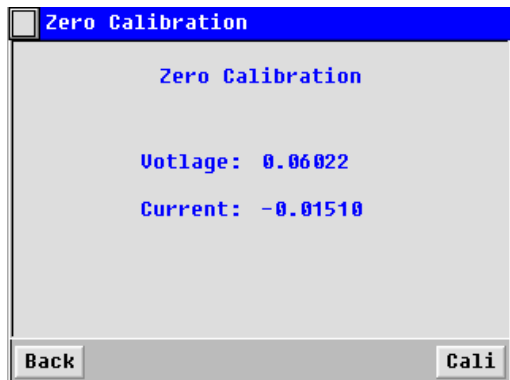
This manual should be used for calibration of the LB-1000 Battery Charger/Discharger. Before starting the calibration, please make sure to have these items available: 2V cell, 12V cell, voltmeter & standard current meter. Then, go to the System menu, select 'Calibration', and carefully follow the steps as below.

NOTE: The password for entering the calibration screen is 88*****. The password for saving calibration after completion: 97*****. After any calibration, please do not forget to save the changes or it will revert them after shutting down the system. To do this, select the 'Save Changes' button in the calibration menu and enter the password.

1. Zero Calibration

Zero calibration is used when the unit cannot collect voltage and current values in normal operation. Steps of zero calibration are as below:

First remove the voltage testing lead connection from the battery (load cables can remain connected). Then go to [System] → [Calibration] → [Zero-Cali], and select the "Cali" button as shown below. Normally, the voltage value should not be negative, and the current value should be close to 0 Amps.

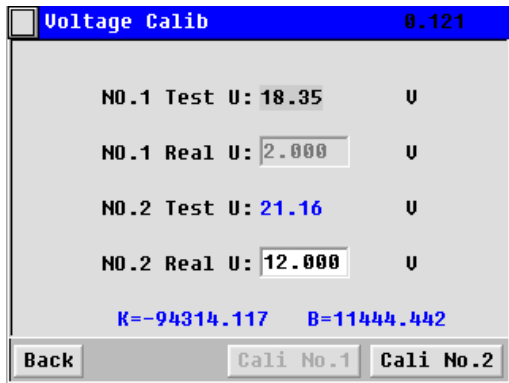


2. Voltage Calibration

For voltage calibration, connect the voltage testing leads between the LB-1000 and your battery. Go to [System] → [Calibration] → [Volt-Cali]. The calibration will be performed on 2V and 12V cells, one by one.

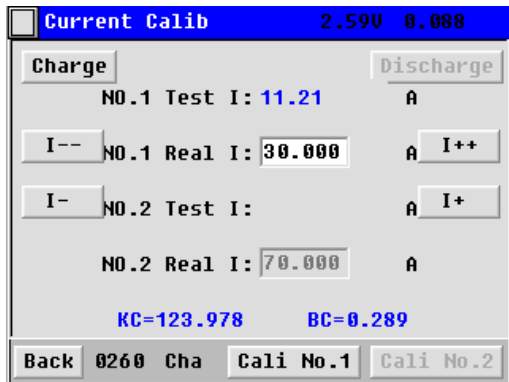
First, connect to a 2V cell and then enter the "No. 1 Real U" (measured voltage), found by using a voltmeter to measure across the terminals of the cell. After that, select the button "Cali No.1" to set this value, then it will go to calibration for 12V.

Then connect the LB-1000 leads to a 12V cell and enter "No. 2 Real U", found by using a voltmeter to measure across the 12V cell. After that, select the button "Cali No.2" to set this value, then save the voltage calibration.



3. Current Calibration

Go to [System] → [Calibration] → [Curr-Cali]. The calibration will be done on 2V and 12V cells respectively for both charge and discharge functions. Generally, if calibration at 2V is OK, then there is no need to calibrate at 12V.



I-- is for a large decrease of current value while I- is for a small decrease. Similarly, I++ is for a large increase of current value while I+ is for a small increase.

2V Calibration:

Please first do calibration for charge using 2 points. Then calibrate discharge using 2 points.

For “No. 1 Test I”, charge at around 10A and input “No. 1 Real I” as per the reading of the current meter around the load cable.

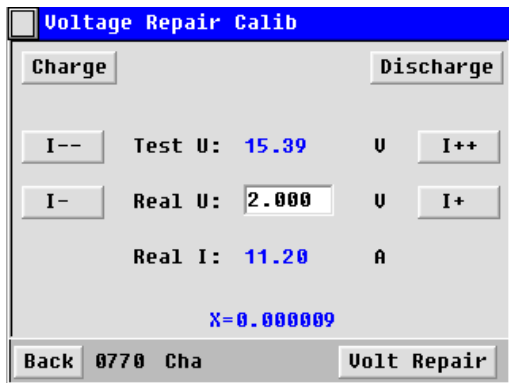
After the correct input of the first point, select the button “Cali No.1”. It will set and go to the second point of calibration. Then increase the charge current to around 80A and again input the current value as per the reading on the current meter. Select the button “Cali No.2” to set and proceed.

After charge calibration, it will switch to discharge calibration. Then follow the same steps again for discharge, to first calibrate at around 10A and then at around 80A.

12V Calibration:

Calibration at 12V is similar to that of 2V. Set the first points for charge and discharge current around 10A, and set the second points around 20A.

4. Voltage Repair



This calibration should only be used when the voltage reading is not accurate at high current. Otherwise, it is not necessary. This calibration will be done on 2V and 12V cells respectively.

If calibration at 2V is accurate for the whole unit, then at 12V there is no need to calibrate.

2V Calibration:

First, do the calibration for the charge function.

Connect the unit with a 2V cell, you will see the voltage "Test U" measured by the unit. Increase the current value (Real I) to between 75A~80A and then input the "Real U" as per the voltmeter reading. Select the button "Volt Repair" to set it and switch to discharge calibration, which is done in a similar way to charge calibration with current between 75A~80A.

12V Calibration:

Calibration of a 12V cell is similar to that of 2V. First calibrate the charge and then the discharge, with current set around 20A.

5. Save Data

Do not forget to save the change after each calibration is done. Select 'Save Changes' and enter the password 97*****.