

Topic ID: 813

Title: Battery pack won't Charge

The batteries in the Carlson Surveyor are “smart batteries”, so when the battery reaches a very deep discharge state the firmware shuts down the battery and the data collector will not turn on.

Some batteries can get stuck in a “Critically low power state” and they will not accept a proper charge when installed in the Data Collector and the AC Wall charger is connected for a few hours.

Please follow the steps below to resolve this issue:

1) Install the battery pack into the Surveyor+ and drain the battery completely:

- a. Exit out of SurvCE by going into File / tap Exit / tap Yes
- b. Tap Start in the upper left / tap Settings / tap the System tab in the bottom left
- c. Scroll down and tap the Power Icon then tap the Advanced tab in the bottom left
- d. UNCHECK “Turn off device if not used for” under the “On battery power” as shown in the screenshot below.

e. CHECK the box under “On External Power” and set it for 30minutes

f. Then tap OK in the upper right to save your settings and tap X to return to the Today screen.

g. Now you can unplug the unit from the AC Wall Charger and leave the screen powered on until the unit turns itself off {This may take a few hours if the unit has more than 10% of charge left}

2) After the battery is drained - Remove the battery from the unit by opening the back hatch and lifting it out

3) With the battery STILL removed - plug in the AC Wall Charger to the top of the Surveyor

4) Turn on the Surveyor and let it stay powered on and plugged in for 4 or 5 minutes without a battery pack installed

5) With the data collector still Powered on and Plugged into the wall charger, the battery should then be installed and if the battery was completely drained you would need to leave it plugged in for 5 or 6 hours to fully recharge to 100%

6) You can Repeat Step # 1a to 1d then CHECK the “On Battery Power” box and set it to 5 minutes then tap OK to save these settings.

Topic ID: 735

Title: Using 2 Battery Packs

This is in regards to installing 2 battery packs into the Surveyor+ data collector.

The battery charging circuitry in the Surveyor+ has some unique behavior when using two batteries:

- 1) When charging two batteries in the Surveyor+, the batteries are charged one at a time, the main battery (lower compartment) first, then the backup (upper compartment) battery.
- 2) When the Surveyor+ is operating, if both batteries have the same charge level, they are both discharged at the same time, if the two batteries have different charge levels, the higher charge level battery is discharged until it reaches the level of the lower charged battery, then both batteries are discharged equally.
- 3) The battery charge icon in Windows Mobile and in SurvCE only reports the charge level of the main (lower compartment) battery. This means that if both batteries have different charge levels, the battery charge icon in SurvCE will not always report the correct charge level.
- 4) When charging a Surveyor+ with two batteries, especially one that has been fully discharged, if you plug in the charger and monitor the battery icon on the system, and unplug when it shows a full charge, then you may have only charged the main (lower compartment) battery.
!!! PLEASE NOTE: It takes 10-12 hours to fully charge two batteries in the Surveyor+ !!!
- 5) The best way to determine charge level of the two batteries in the Surveyor+ is to Exit SurvCE and tap on the Battery Icon in the upper right just to the left of the clock so you can view the individual charge levels of each battery.