

TM



OPERATING INSTRUCTIONS

Select-A-Charge On Board Battery Chargers

models: SCO, SCOXU

For Industrial Use: Designed for gel, wet cell, AGM, and Lithium Ion batteries

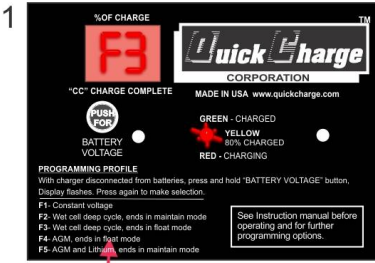


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www.quickcharge.com
Made in the U.S.A

Ver. 7-21

QUICK START INSTRUCTIONS:

Check for any damage before proceeding. Read all instructions.



Connect red lead to battery positive, black to negative. Plug charger into AC power. The charger will display the profile it is set to, and the LED will flash red. By the descriptions, verify it matches your battery type. If not, disconnect a battery lead, and go to programming section.



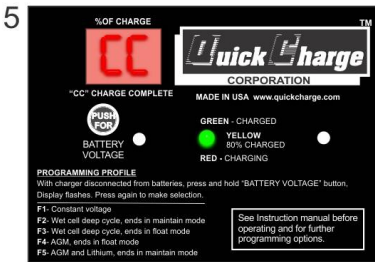
After displaying the profile for a few seconds, the LED will turn solid red, and display 02 on a discharged battery. The time it spends there depends on how deeply discharged it is, it may be hours before it starts to move higher, or seconds if the batter is already charged.



As the cycle progresses, the display indicates the progress. Here the cycle is 34% complete.



When the cycle is 80-82% complete, the LED will turn yellow.



Shortly after the cycle reaches 99%, the cycle terminates and displays CC "Charge Complete". The LED will be solid green if the charger is set to maintain mode, or flicker if set to float mode.

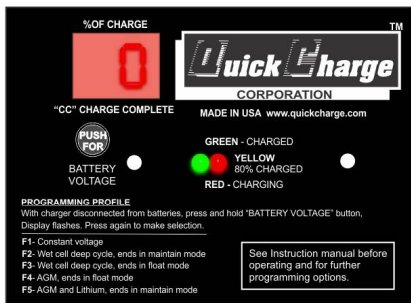
- NOTE: The charger can be left on in any mode indefinitely without harm to the batteries.

- Remember, the percent of charge showing on the display refers to the progress of the charge cycle, not the capacity of the battery(s).

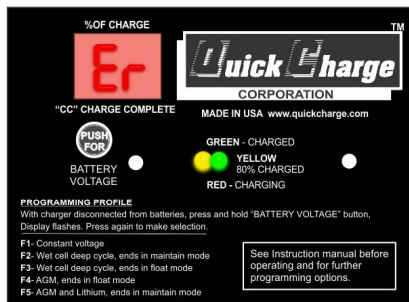
- Any time during the cycle the "BATTERY VOLTAGE" button may be pushed for a reading. On units where the voltage is over 100, add a 1 in front of the two numbers.

- On units having a fan, do not operate the charger if the fan does not come on at start up.

OTHER DISPLAYS: See trouble shooting section for further explanation



When AC power is applied, but the charge leads are not connected to the battery, or if connected reverse, A red/green alternating LED.



Error is displayed at the end of a cycle and a green/yellow alternating LED if a minimum voltage is not reached in the time given. See trouble shooting for more info.

To discontinue charging, unplug AC power.

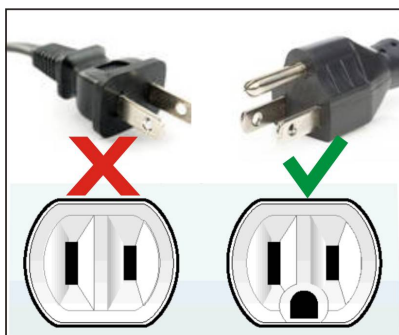


SAFETY INFORMATION AC WIRING:

Before making AC connections, refer to the requirements on the charger ID label. If your charger is not equipped with an AC plug, *for example, a 230 volt charger*, have a qualified electrician install one.

To reduce the risk of fire, use this charger only on branch circuits that are protected by a circuit breaker or fuse, and that are adequate to carry the power drawn by the charger. All wiring should be in accordance with the National Electric Code, ANSI/NFPA 70, and all local codes and ordinances.

This battery charger must be grounded to reduce the risk of electric shock. 117 volt chargers are equipped with a grounding type plug, 230 volt chargers are shipped without a plug. Have a qualified electrician install a properly grounded 3 wire plug.



DO NOT USE THIS CHARGER ON A TWO POLE UNGROUNDED OUTLET OR ATTEMPT TO BREAK OFF THE GROUND PRONG FOR USE ON A RECEPTACLE OR EXTENSION CORD NOT HAVING A GROUND.

If an extension cord must be used, make sure it is in good condition. Use a three conductor cord no smaller than the size being used on the charger, and keep it as short as possible. The use of an improper extension cord could result in a risk of a fire or electric shock. Locate all cords so that they will not be stepped on, tripped over, or otherwise subjected to damage or stress.



OTHER SAFETY INFORMATION

Do not use charger if it shows signs of physical stress, or if DC output leads or connector feel hot when used.

Do not disconnect the DC output clamps, or connector from the batteries when the charger is on. The resulting arcing could cause the batteries to explode.

Failure to unplug AC power before moving or driving equipment will result in damage to cords, plugs and receptacles.



BATTERY SAFETY & CARE INFORMATION

Always wear protective eye shields and clothing when working with batteries. Batteries contain acids which can cause bodily harm. Do not put wrenches or other metal objects across the battery terminal or battery top. Arcing or explosion of the battery can result. Do not wear jewelry when working around batteries. Arcing can cause severe burns.

The tops of the batteries and battery hold downs must be kept clean and dry at all times to prevent excessive self discharge and flow of current between the battery post and frame.

With wet cell batteries, maintain the proper electrolyte level by adding water when necessary. Never allow the electrolyte level to fall below the top of the battery plates. Electrolyte levels fall during discharge and rise during charging. Therefore, **to prevent the overflow of electrolyte when charging, add water only after the batteries have been fully charged, or just enough to cover the plates if discharged.** Old batteries require more frequent additions of water than do new batteries.


Do not over discharge batteries. Excessive discharge can cause polarity reversal of individual cells resulting in complete battery failure. Re-charge batteries as soon as possible after a deep discharge, but not if they are warm, allow a cooling down period.

Provide adequate ventilation when charging batteries. Chargers can ignite flammable materials and vapors. Do not use near fuels, grain, dust, solvents, or other flammables.

Do not charge batteries in excessively hot temperatures; wait till the cool of the evening.

PRE CHARGE INFORMATION:

Mount the charger in the desired location, any orientation. Allow space for the charger to dissipate heat, it will get hot while in use. Do not seal the charger in an air tight compartment. Do not cover the charger with any material. **NOTE:** The OB models are *NOT* water proof, they are water resistant. This means they cannot withstand immersion, or continuous exposure from pressure washers, or heavy rain.

 Connect the red charge lead to battery positive, black to negative. But before, make sure the battery pack is of the same voltage rating of the charger. If you are unsure, count the number of cells on the battery pack and multiply by two. This figure should be the same as the DC voltage rating of the charger. (*see ratings label on charger*) Charging a battery with a lower voltage rating than the charger will cause damage to batteries, charger, and can create an explosive atmosphere.


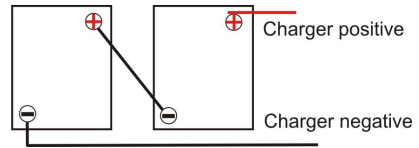
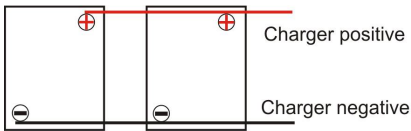
 Make sure the AC cord, DC output leads, terminals, connectors, or clamps are all in good working condition. Do not use the charger if there are any signs of stress or damage, or if wires are cut or have damaged insulation. Using this charger with any of these symptoms could result in a fire, property damage, or personal injury. Have a qualified service person make the necessary repairs. Repairs should not be made by people who are not qualified.

Illustration of series and parallel battery connections:



Parallel

When batteries are connected in Parallel the battery amp hour capacity is additive and the voltage remains the same.

Example: two 180 amp hour 12 volt batteries would equal 12 volts and 360 amp hour capacity

Series

When batteries are connected in Series the voltage is additive and the battery amp hour capacity remains the same.

Example: two 180 amp hour 12 volt batteries would equal 24 volts and 180 amp hour capacity

EQUALIZATION:

When using multiple batteries in a series string, cells become uneven during charge and discharge cycles. At least once a month perform two charge cycles back to back, this will give a chance for cells that are lagging behind to catch up, and is important to overall battery performance. NOTE: This only needs to be done when using **F2, F3, F4**, settings, but not on **F1**, or **F5**.

DRIVE LOCKOUT OPTION:

If your charger has an extra pair of small wires with a connector, spade terminals, or just bare wires, it has this option. These wires connect to your equipment if it has this feature. The purpose is to disable the drive mechanism of the equipment when the charger is plugged in so it cannot be moved and cause damage to the AC cord and receptacle. **These wires do not have to be connected for the charger to work.**

REPROGRAMMING:

There are 5 charge profiles, and 5 programming adjustments that can be made to the profiles.

The “F” adjustments are:

F1- constant voltage of 2.3 volts per cell is reached and maintained indefinitely. Cycle ends with flickering green LED. Generally used for stand-by starting batteries, or if the charger is being used with the batteries as a power supply.

F2- Used on wet cell deep cycle batteries. The cycle ends in maintain mode indicated by “CC” and solid green LED. If the **r** setting is set to 0, the charger will not turn back on. If the setting is **r1**, the charger will maintain the batteries by way of periodically checking the battery voltage, and will recycle when needed.

F3- Also used on wet cell deep cycle batteries. The cycle ends in float mode. Indicated by CC, and a flickering green LED. The charger does not shut off, but holds the batteries at a minimum voltage level indefinitely. **Not recommended for batteries left for months unattended. Use the F2 setting.**

F4- Used on AGM batteries. The cycle ends in float mode. Indicated by CC and a flickering green LED. The charger does not shut off but holds the batteries at a minimum voltage level indefinitely. **Not recommended for batteries left for months unattended. Use the F5 setting.**

F5- Used on AGM and Lithium Ion batteries. The cycle ends in maintain mode indicated by “CC” and solid green LED. If the setting is **r1**, the charger will maintain the batteries by way of periodically checking the battery voltage, and will recycle when needed.

The “d” adjustments are:

d0 standard gassing/absorption cycle. Applicable to most applications, and lithium.

d1 shortened gassing/absorption cycle. For frequent shallow discharging, or frequent recharging of batteries with very little discharge. Suitable for opportunity charging.

d2 lengthened gassing/absorption cycle. For batteries requiring long gassing/absorption cycles. **US Battery**, and **Full River** are two brands that benefit from longer charge cycles. Also used if the batteries are larger than the recommended size for the charger.

The “r” adjustments are:

r0 when set to the **F2, or F5** profile, charge will terminate, and will not monitor the battery.

r1 when set to the **F2, or F5** profile, charge will terminate, and the battery will be checked weekly, if the voltage falls to a predetermined level, the charger will recycle and bring the battery(s) back up.

To change the profile: *Be firm and deliberate when pressing the button.* Disconnect one charge lead. Plug the charger into AC power. Display should show “0”. Press and hold the “Battery Voltage” button. The display will flash the current setting. Press the button repeatedly, and stop at the desired profile. The display will stop flashing, return to 0 and remember the setting. Unplug AC power, and reconnect the battery. When powered back up, the display will flash the changed setting, and the charge cycle will begin.

To change the adjustments: Follow the above procedure, except press the button twice to enter the **d** menu, press the button three times to enter the **r** menu. Once in the menu, press the button and HOLD to set the display flashing, each push when flashing changes the setting. A reprogramming video is available at quickcharge.com on the Select-A-Charge pages.

TROUBLESHOOTING

| Symptom | Cause | Corrective Action |
|---|---|---|
| When plugged into AC power the LED flashes red/green, and a 0 on display. | <p>Connected reverse to battery, or not connected to battery.</p> <p>Break in DC cord, or connector.</p> <p>Battery too dead to charge.</p> | <p>Correct polarity, or connect to battery.</p> <p>Have a qualified person make repair.</p> <p>Replace.</p> |
| When plugged into AC power the display does not come on. | No AC power. | <p>Check circuit.</p> <p>Check extension cord for breaks or damage.</p> |
| When I put a volt meter across the output of the charger there is no power coming out when I plug it in. | The charger must be connected to a battery to turn on. | |
| The batteries don't receive a full charge. On wet cells, the specific gravity will not rise to a full reading after the charge has completed. | <p>The charger is too small for the battery.</p> <p>The charge profile is not set correctly.</p> <p>The cycle needs more time.</p> <p>The battery is defective.</p> | <p>Check that the charger's output is about 10% of the amp hour rating of the battery.</p> <p>Recheck the setting. If in doubt, contact us.</p> <p>Set gas/absorption to d2.</p> <p>Replace.</p> |

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| <p>On start up, the LED flashes red and “F” function repeatedly.</p> | <p>Charger and battery voltage mismatch.</p> | <p>Connect the charger to a battery(s) with the same voltage rating.</p> |
| <p>When powered up the LED is solid red with a yellow flash, and displaying 02.</p> | <p>The battery is very low, and the charger is in a slow charge phase until the voltage rises to a safe level before full turn on.</p> | <p>Leave connected, it may take hours, but if the voltage rises even a little bit, it should recover, and turn the charger full on. <i>(Do not allow your batteries to deep discharge, it is the number one cause of premature battery failure.)</i></p> |
| <p>The charger blows it’s fuse, or branch circuit fuse/circuit breaker as soon as it’s switched on.</p> | <p>Charger is shorted.</p> | <p>Contact factory.</p> |
| <p>The charger blows the branch circuit fuse/circuit breaker a short while after being switched on.</p> | <p>The branch circuit is too small.</p> | <p>Relocate charger to a branch circuit with a heavier rating, or remove other loads on the circuit.</p> |
| <p>Batteries use water, get hot, or smell.</p> | <p>One or more dead cells.</p> <p>Profile not set correctly.</p> | <p>Replace batteries. If charging in a series string, it is best to replace all the batteries rather than mix new with old.</p> <p>If shallow discharging, check that the gassing/absorption profile is set to d1</p> |
| <p>After a full charge, the batteries die quickly</p> | <p>The batteries are sulfated.</p> | <p>Sometimes batteries can be recovered. Leave the charger on for some hours, if the voltage falls and the current begins to rise, it is a good sign they can recover under normal charging.</p> |

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| <p>The cycle ends with Er showing, and a green/yellow flashing LED.</p> | <p>An incomplete cycle. The batteries did not reach minimum voltage requirements, and the charger bulk timed out.</p> | <p>The batteries are too big for the charger.</p> <p>The batteries have defective cells, and cannot make minimum voltage.</p> <p>NOTE: An occasional short cycle is not a problem. Just unplug the charger and plug back in to complete the cycle.</p> |
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**QUICK CHARGE SCO Battery Chargers
“LIMITED WARRANTY”**

Quick Charge Corporation warrants the SCO line of chargers for three (3) years from the date of purchase. After the warranty period, chargers returned to the factory for repair will be charged a minimum rate of \$25.00. Charger will be returned, freight and repair charges, C.O.D. unless other arrangements have been made. This warranty covers all defects in manufacture and performance, provided the unit is operated in compliance with manufacture's operating instructions.

For repairs to be made at the Quick Charge factory, a charger and/or component(s) should be sent, freight prepaid to Quick Charge at:

Quick Charge Corp.
1032 S.W. 22nd St.
Oklahoma City, OK. 73109

Quick Charge, will at it's option, repair or replace the charger or component in question. The repaired item will then be returned, freight prepaid by Quick Charge. This warranty is void if the charger or component have been altered, changed, or repaired by anyone not authorized by Quick Charge, or if the charger or component, have been subjected to misuse, negligence, or harsh environmental conditions. (Except those chargers designed for such conditions)

If returning the charger to the factory is not practical, replacement parts may be shipped to the customer for field repair at no charge. On parts such as circuit boards, the customer will be required to return the board suspected to be defective to Quick Charge, freight prepaid. If such defective parts are not returned, the customer will be invoiced for the repair parts. Field repairs are made at the user's own risk. "Authorization" by Quick Charge to repair refers to maintaining the warranty only. Quick Charge assumes no responsibility or liability for field servicing, and shall not be responsible for incurred travel or labor charges.

Quick Charge corporation shall not in any event be liable for the cost of any special, indirect or consequential damages to anyone, product or thing. This warranty is in lieu of all other warranties expressed or implied. Quick Charge neither assumes nor authorizes any representative or other person to assume for us any liability in connection with the sale of this product.