

TM



## OPERATING INSTRUCTIONS

### Select-A-Charge **Plus** SCES, SCESX, Battery Chargers

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





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Made in the U.S.A





## QUICK START GUIDE READ ENTIRE INSTRUCTION MANUAL BEFORE OPERATING


1. This charger is battery driven. Nothing will happen if the charger is plugged into AC power and the charge leads are not connected to a battery. Programming is done with NO AC power. Observing polarity, connect the charger to batteries. The LED will flash red for about 30 seconds, then go out. The display will remain blank.

### Battery Type Setting



2. Press the button . The battery type, and charger rating will display.  To change the battery type, press and hold the button, the display will flash. Press the button repeatedly to cycle through the selections. AGM, wet cell, or lithium batteries. Stop on the desired selection. When the display stops flashing and goes out, the selection is retained until changed.

### Profile Setting

3. Press the button two times. The default charge profile is displayed.  In most cases, no change is needed here. Some battery manufactures require additional time for the last 20% of the cycle. **US Battery, NorthStar, Odyssey, Full River** are a few. To extend the cycle, press and hold the button until it flashes. Press the button again to select When the display stops flashing and goes out, the selection is retained until changed. Using the extended cycle on batteries that do not require it will cause no harm, 

In cases where the charger is undersized to the battery, additional time may be needed to reach the last 20% of the cycle. In this case, with the "Discharge Cycle" showing in the display, press the button two times to select  When the display stops flashing and goes out, the selection is retained until changed.

### Recycle Setting

4. Press the button 3 times. The default recycle setting is displayed.  In this setting, the charger uses battery voltage to determine if a recycle is needed. If you would like to use time as a determinate, press and hold the button, the display will flash. Press the button repeatedly to cycle through the selections.  Stop on the desired selection. When the display stops flashing and goes out, the selection is retained until changed. If time is used, it does not replace battery voltage monitor, it will recycle based on both settings.

## Sample Displays During Charging

### READ ENTIRE SAFETY, WIRING, PRE CHARGE, AND BATTERY CARE SECTIONS BEFORE PROCEEDING.

1. After pre charge settings are made. Plug the charger into AC power that matches the requirements on the data sticker, and power the charger on. The display should read the charging volts and amps. In this case the 24 volt 25 amp charger is putting out 24.2 amps at a battery voltage of 26.4.

As the battery becomes charged, the voltage will rise, and the amps will fall.



26.4 V  
24.2 A

2. Anytime during the charge cycle the  may be pushed.  Is the total running time of the charge cycle.

Is the charging time spent below 80% complete. LED will be RED until 80%



Bulk Time  
04:23

 The completion of the charge cycle. This is not to say that the batteries are 80% charged, but the cycle is 80% complete. The LED will turn yellow/orange.

 The energy returned to the battery. Can be compared to the amp hour rating of the battery to determine capacity, and battery health.

3. When the cycle is complete, the display will go out, and the LED will flash green. The charger is in monitor mode.  may be pushed anytime to review the completed cycle. Recycling the AC power will start a new cycle.

## Other Displays



Safety  
Mode

At start up when batteries are severely discharged, the charger will start at a lower power until the batteries rise to a level safe enough for full output. This could take hours depending on the depth of discharge.



Battery  
Error

At the end of the cycle minimum voltage levels were not met. Cycles repeatedly ending in this message probably means the batteries are at the end of their useful life. A charger too small for the batteries will also produce this message.



Cable  
Fault

There is a loose connection in the charge leads or battery connections.

To discontinue charging, switch the power off, and disconnect

**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. Not required for Lithium Ion batteries.

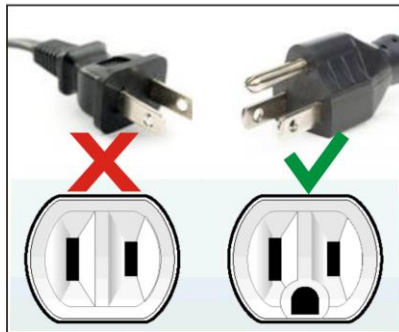


**SAFETY INFORMATION AC WIRING:**

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.

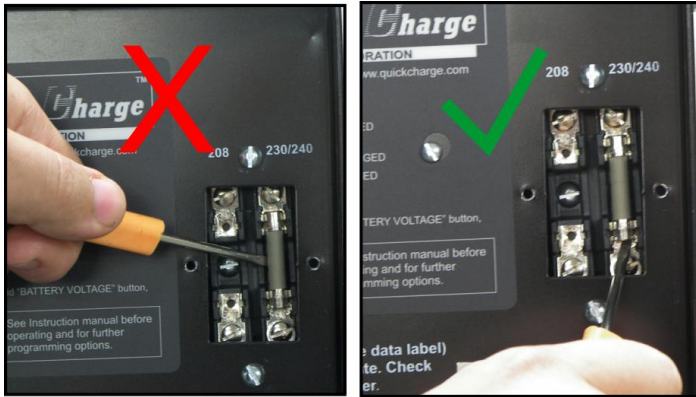
This battery charger must be grounded to reduce the risk of electric shock. 117 volt chargers are equipped with a grounding type plug, 230 volt chargers are shipped without a plug. Have a qualified electrician install a properly grounded 3 wire plug.



**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.

**FOR MODELS HAVING A CHANGEOVER FUSE FOR 208 or 230 VOLTS**



If your charger can accommodate 208 or 230/240 volt input, and has a cover plate, remove the two side screws. If necessary, remove the fuse as shown. Press it into other clip until it snaps in place. Replace plate. 120 volt models will be factory set and do not need to be changed.

**FOR MODELS HAVING A CHANGEOVER TAP FOR 208 or 230 VOLTS**

Lift cover over large screw heads and rotate to swing down



If your charger can accommodate

208 or 230/240 volt input, and has a cover plate, remove the top screw only and rotate the cover down. Note what stud the tap wire is connected to, 208 or 230/240. Now, check that your incoming power matches where the tap wire is. If it needs to be changed, hold the wire and pull it out slightly while removing the nut, keep the driver over the nut so it doesn't fall inside the case. If it does, you will need to remove the top cover of the cabinet, and the front panel to get to it. Place the wire over the correct stud and replace nut, then replace cover screw.

 **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.

Do not expose charger to rain.

The charger will become hot during use, provide adequate air flow around it. Do not place charger on cloth or vinyl seats, blankets, or around any other obstructive materials. Do not place charger against walls, allow 12" of space on all sides.

 **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.

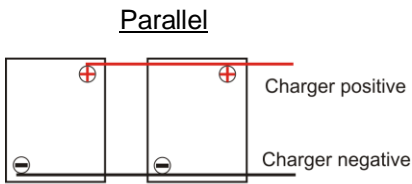
Do not charge batteries in excessively hot temperatures; wait till the cool of the evening.

### **PRE CHARGE INFORMATION**

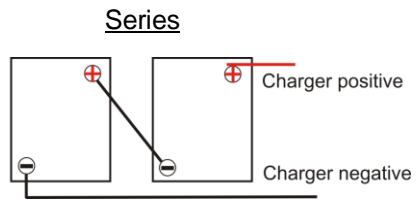
Before connecting the charger to the batteries, make sure the battery pack is of the same voltage rating of the charger. If you are unsure, count the number of cells on the battery pack and multiply by two. This figure should be the same as the DC voltage rating of the charger. (*see ratings label on charger*)

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:



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



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

## TROUBLESHOOTING

Symptom	Cause	Corrective Action
When plugged into AC power and powered ON there is no display, and no LED.	<p>Connected reverse to battery, or not connected to battery.</p> <p>Break in DC cord, or connector.</p> <p>Battery has no voltage.</p>	<p>Correct polarity, or connect to battery. On chargers having a black and white wire, white is positive.</p> <p>Have a qualified person make repair.</p> <p>Replace.</p>
When connected to battery, and powered ON the display, and LED does not come on.	<p>No AC power.</p> <p>Blown fuse.</p>	<p>Check circuit.</p> <p>Replace with one having The same ratings.</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	The charger must be connected to a battery to turn on.	Connect to battery.



<p>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>	<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 "Extended"</p> <p>Replace.</p>
<p>On start up, the LED flashes red and yellow. Display reads "Battery Error".</p>	<p>Battery voltage is higher than the charger rating.</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 "safe mode"</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>.</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>If charger has adjustable taps, it is on the wrong one.</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>If charger has adjustable taps, it is on the wrong one.</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>Replace batteries. If charging in a series string, it is best to replace all the batteries rather than mix new with old.</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>
<p>The cycle ends showing “Battery Error” and red/yellow flashing LED.</p>	<p>An incomplete cycle. The batteries did not reach minimum voltage requirements, and the charger timed out.</p>	<p>The batteries are too big for the charger.</p> <p>The batteries have defective cells, and cannot make minimum voltage. Replace.</p> <p>NOTE: An occasional short cycle is not a problem. Just unplug the charger and plug back in to complete the cycle.</p>

## **QUICK CHARGE Select-A-Charge PLUS Battery Chargers "LIMITED WARRANTY"**

Quick Charge Corporation warrants this 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 \$35.00. 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.