Quick Charge™ CORPORATION

OPERATING INSTRUCTIONS

QPA12v/50A Parallel Charger

INTRODUCTION:
Designed for group charging starting batteries, gel batteries, AGM batteries, and wet cell deep cycles in parallel. Current is adjustable from 1 to 50 amps. Voltage from 13.0- 16.0.

INITIAL INSTALLATION:
Before making AC connections, refer to the AC requirements labeled on the charger ID tag. If your charger is not equipped with an AC plug, *for example, a 220 volt charger*, have a qualified electrician install one.

⚠ **CAUTION:** To reduce the risk of fire, use this charger only on circuits provided with a maximum of 20 ampere branch circuit protection (circuit breaker or fuse), In accordance with the National Electric Code, ANSI/NFPA 70, and all local codes and ordinances.

GROUNDING INSTRUCTIONS:
This battery charger must be grounded to reduce the risk of electric shock. If the charger is equipped with a grounding type plug, it must be plugged into a nominal 115 volt, 60 Hertz circuit. If the charger is supplied with no plug, have a qualified service person install one.

⚠ **WARNING:** Improper connection of the equipment grounding conductor can result in a risk of an electric shock. **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 EXTINSION CORD NOT HAVING A GROUND.**

The use of an extension cord with this charger should be avoided. The use of an improper extension cord could result in a risk of a fire or electric shock. If an extension cord must be used, make sure it is in good condition. Use a three conductor cord no smaller than 14 AWG. And keep it as short as possible. Locate all cords so that they will not be stepped on, tripped over, or otherwise subjected to damage or stress.

Do not operate this charger if it shows any signs of physical damage.

PROPER CARE AND USE OF BATTERIES:

⚠ **CAUTION:** 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 sever burns.

New batteries will not deliver their full performance until after several cycles.

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.

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 DO NOT OVERFILL. Old batteries require more frequent additions of water than do new batteries.

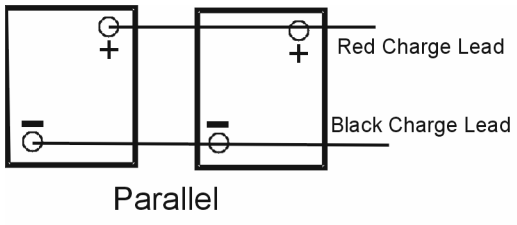
Do not over discharge the batteries. Excessive discharge can cause polarity reversal of individual cells resulting in complete battery failure.

Provide adequate ventilation for the batteries and charger. Do not obstruct the flow of cooling air around the charger. Provide at least 1" of space around charger. Do not allow clothing, blankets or other material to cover the charger.

WARNING: Chargers can ignite flammable materials and vapors. Do not use near fuels, grain, dust, solvents, or other flammables.

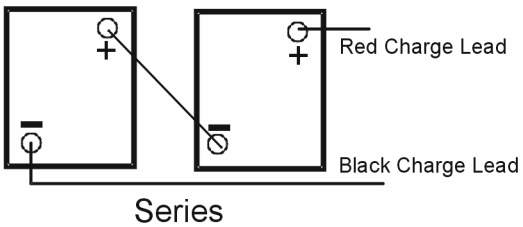
CAUTION: Before connecting the charger to the batteries, make sure the battery pack is of the same voltage rating of the charger.

Below is an illustration of Parallel and Series battery packs.



Parallel

When batteries are connected in parallel, the battery amp hour rating is additive, and the voltage remains the same. Example: Two 180 amp hour, 12 volt batteries would equal 12 volts, and 360 amp hours capacity.



Series

When batteries are connected in series, the voltage is additive, and the amp hour rating remains the same. Example: Two 180 amp hour, 12 volt batteries would equal 24 volts, and 180 amp hours of capacity.

WARNING: Make sure the DC output leads, terminals or connector are all in good working condition.

DO NOT USE THIS CHARGER IF:
The DC output connector, *(if equipped*) is loose or does not make good contact; Is cracked or broken; The leads are cut or have exposed wires; The DC output leads, clamps, or connector feel hot when used.

Using this charger with any of the above 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.

PREPERATION:

Determine how many batteries you want to charge. You have 50 amps of capacity which will be divided between the number of batteries on line. For example, if you put 10 batteries on line and turn the rate control wide open, each battery will receive approx. 5 amps. Conversely, you could charge 1 battery at anywhere from 1 – 50 amps. Next, determine the maximum voltage you want to reach, if you are not sure, consult the battery mfg., or use these settings as a general rule.

Gel batteries	13.5 - 14.0
AGM batteries	14.4 - 14.7
Wet starting batteries	13.8 - 14.7
Wet deep cycle batteries	15.0 – 15.8

VOLTAGE SETTING & NORMAL OPERATION:

1). First, we will set the maximum voltage you want to reach. The easiest way is to connect (1) fully charged battery to the charger, but before we do that, move switch to off position, and turn both controls down.

2). Observing polarity, connect the leads to the battery. Plug the charger into a circuit known to have 117 volts 60 Hz. Move the switch to the "ON" position.

3). Turn the voltage control up to about the AGM marking. Slowly turn the current control up until the voltage rises ½ to 1 volt beyond the point you want to set *(if you can't reach it, turn the voltage control up more)*, then set the voltage control back to the desired setting. When selecting the final voltage it is important that the current be below 5 amps or the set point will drift lower as the current declines. A below 5 amp reading should be easily obtainable on a fully charged battery, if not, wait till it lowers.

4). Leave the voltage control at set point. Turn current down, and move switch to OFF position.

5). Now you can begin connecting batteries of the same type in parallel, or series parallel as shown in the illustration. Connect each battery to the charging bus with 8 awg wire. Make sure all connections are clean and secure.

6). Now turn the charger back ON and increase the current control. Remember, whatever the current is on the ammeter is divided among the batteries. The amount of current going to each battery will be proportionate to it's depth of discharge.

7). Your battery group has reached full charge when the voltage you selected is registered on the voltmeter, and the charge current is below 5 amps. If current fails to fall below 5 amps, you probably have a battery with a dead or shorted cell that is continuing to draw current. This battery should be identified and removed from the group to avoid gassing and over heating. Don't' remove the battery until the charger has been shut down.

ADDITIONAL INFORMATION:

WARNING: A group of batteries should never be left unattended for long periods of time. It is important to identify and remove bad batteries as described above.

If you desire, you may lower the voltage into the float range and leave the group connected without fear of overcharging. A float setting of around 13.3 -13.5 should be safe for all batteries.

This charger requires some experience and trial and error. After a few uses you will gain confidence and understanding in its capabilities.

WARNING: Do not disconnect the DC connections when the charger is on. The resulting arcing could cause burning of terminals, clips or receptacles.

MAINTENANCE:

Keep charger clean using a damp cloth only.

TROUBLE SHOOTING:

DANGER: To reduce the risk of electric shock, always disconnect both the AC power supply cord and the output leads or connector before attempting any maintenance cleaning.

1). **POWER LIGHT DOES NOT COME ON WHEN POWER IS APPLIED**
Check connections. Make sure you are plugged into a live AC circuit. Check fuse. If blown, replace with one having the same ratings.

3). **AC LINE FUSE OR CIRCUIT BREAKER BLOWS:**
The charger is shorted internally.

4). **NO POWER IS PRESENT ACROSS THE DC LEADS WHEN A VOLT METER IS CONNECTED:**
The charger will not turn on until connected to the battery. The battery must have at least 5 volts to turn the charger on.

5). **BATTERIES DON'T RECEIVE FULL CHARGE:**
Your volt setting might be too low.

6). **NO VOLTMETER READING:**
The sense leads on the dc cables may be broken.

QUICK CHARGE QPA12v/50A APU Battery Charger
"LIMITED WARRANTY"

Quick Charge Corporation warrants the QPA12v/50A charger 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.