

# SAVE THESE IMPORTANT SAFETY INSTRUCTIONS



This manual contains important safety and operating instructions – read before using charger.

**Warning:** Use charger only with an algorithm selected that is appropriate to the specific battery type. Other usage may cause personal injury and damage. Lead acid batteries may generate explosive hydrogen gas during normal operation. Keep sparks, flames, and smoking materials away from batteries. Provide adequate ventilation during charging. Never charge a frozen battery. Study all battery manufacturers' specific precautions, ie. maximum charge rates and if cell caps should be removed while charging.

**Danger:** Risk of electric shock. Connect charger power cord to an outlet that has been properly installed and grounded in accordance with all local codes and ordinances. A grounded outlet is required to reduce risk of electric shock – do not use ground adapters or modify plug. Do not touch uninsulated portion of output connector or uninsulated battery terminals. Disconnect the AC supply before making or breaking the connections to the battery. Do not open or disassemble charger. Do not operate this charger if the AC supply cord is damaged or if the charger has received a sharp blow, been dropped, or otherwise damaged in any way – refer all repair work to the manufacturer, or qualified personnel. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

# INFORMATIONS IMPORTANTES DE SÉCURITÉ



Ce manuel contient des instructions importantes concernant la sécurité et le fonctionnement.

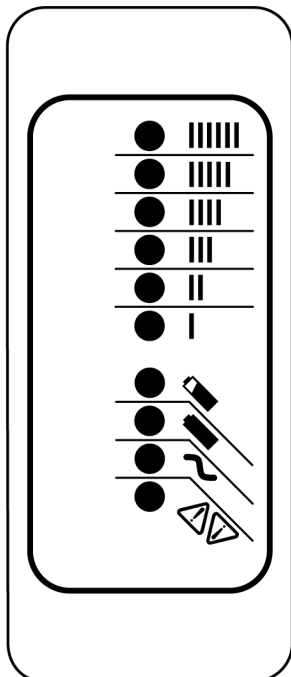
**Attention:** Utiliser le chargeur seulement avec un algorithme approprié au type spécifique de batterie. D'autres types de batteries pourraient éclater et causer des blessures ou dommages. Les batteries peuvent produire des gaz explosifs en service normal. Ne jamais fumer près de la batterie et éviter toute étincelle ou flamme nue à proximité des batteries. Fournissez une ventilation adéquate du chargement. Ne jamais charger une batterie gelée. Prendre connaissance des mesures de précaution spécifiées par le fabricant de la batterie, p. ex., vérifier s'il faut enlever les bouchons des cellules lors du chargement, et les taux de chargement.

**Danger:** Risque de chocs électriques. Ne pas toucher les parties non isolées du connecteur de sortie ou les bornes non isolées de la batterie. Toujours connecter le chargeur à une prise de courant mise à la terre. Déconnectez la source AC avant de faire ou défaire les connexions à la batterie en chargement. Ne pas utiliser le chargeur si le cordon d'alimentation AC est endommagé ou si le chargeur est abîmé suite à une chute ou autre incident. Ne pas ouvrir ni désassembler le chargeur – référer toute réparation aux personnes qualifiées. Cet appareil n'est pas destiné à un usage par des personnes (dont les enfants) avec des facultés motrices, sensorielles ou mentales réduites, ou ayant une expérience et des connaissances insuffisantes, à moins qu'elles sont sous la supervision ou reçoivent les instructions sur l'utilisation de l'appareil d'un répondant garant de leur sécurité. Les enfants devraient être surveillés afin qu'il ne jouent en aucun temps avec l'appareil.

## Operating Instructions

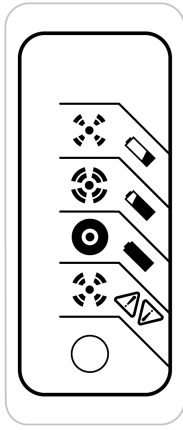
**CAUTION:** Charger enclosure may be hot during charging. Use hand protection if handling the charger while charging.




1. Extension cords must be 3-wire cord no longer than 30m(100') at 10AWG or 7.5m(25') at 16AWG per UL guidelines.
2. Only connect **ONE** QuiQ charger to a single 15A circuit or the circuit may become overloaded.
3. Charger 10-LED Display:



LED Colour	Indication (following "Power-On Self Test")
<b>Ammeter</b> (Amber)	Solid: Displays approximate scale of current output during bulk phase.
	Flashing: High internal charger temperature. Output reduced. Also displays algorithm #1-6 for 11 seconds if no battery is connected.
<b>80% Charge</b> (Amber)	Solid: Bulk charge phase complete, 80% charged. In Absorption phase.
	Flashing: With no battery connected, indicates algorithm # selected by number of flashes.
<b>100% Charge</b> (Green)	Solid: Charging complete. Charger in Maintenance Mode.
	Flashing: Absorption phase complete. In Finish phase
<b>AC On</b> (Amber)	Solid: AC Power good
	Flashing: Low AC Voltage, check voltage and extension cord length (see above for guidelines).
<b>Fault</b> (Red)	Flashing: Charger error. Reset charger power and refer to Troubleshooting Instructions below.

4. Optional Charger Single-LED Display (internal or external)









LED Colour	Indication (following "Power-On Self Test")	
Green	 <b>Solid:</b>	Charging complete. Charger in Maintenance Mode.
	 <b>Flashing:</b>	<i>Short:</i> <80% Charge. <i>Long:</i> >80% Charge. When battery is not connected: Algorithm Number display.
Amber	<b>Flashing:</b>	Reduced Power Mode: Low AC Voltage or High internal charger temperature.
Red	 <b>Flashing:</b>	Charger error. Reset charger power and refer to Troubleshooting Instructions below.

### Maintenance Instructions

- Do not expose charger to oil, dirt, mud or direct heavy water spray when cleaning vehicle.
- If the detachable input power supply cord set is damaged, replace with a cord that is:
  - for North America - UL or CSA listed/approved detachable cord, 3 conductor, 16AWG minimum, and rated SJT; terminating in a grounding type IEC 60320 C14 plug rated 250V, 13A minimum; or
  - for all other countries – a safety approved detachable cord, 3 conductor, 1.5mm<sup>2</sup> minimum, rated appropriately for industrial use. The cord set must be terminated on one end with a grounding type input connector appropriate for use in the country of destination and, on the other end, an output grounding type IEC 60320 C14 plug.
- The enclosure of the charger has been tested successfully to EN60529, meeting IP66. The AC supply inlet is rated to IP20, which is suitable for indoor use only. Keep all AC connections clean and dry.

### Troubleshooting Instructions

If a fault occurs, count the number of red flashes between pauses and refer to the table below:

Red Flashes	Cause	Solution
	Battery High Voltage	Check battery size and condition and reset charger (interrupt AC power for 15 seconds).
	Battery Low Voltage	Check battery size and condition and reset charger (interrupt AC power for 15 seconds).
	Charge Timeout caused by battery pack not reaching required voltage. Charger output was reduced due to high temperatures	Check connections. Operate charger at a lower ambient temperature.
	Check Battery: battery could not be trickle charged up to minimum voltage	Check for shorted or damaged cells.
	Over-Temperature: Charger shut down due to high internal temperature.	Ensure sufficient cooling air flow and reset charger (interrupt AC power for 15 seconds).
	Charger Internal Fault	Reset charger (interrupt AC power for 15 seconds). Return to qualified service depot if fault persists.

Note: This is a Class A product complying with United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 15. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.