

Instruction Manual

QC Avionix BC-1224 Two-Stage 12 and 24 Volt Battery Charger with Polarity Check

WARNING: It is your responsibility to check the charging specifications supplied by the manufacturer of your battery to assure your battery can handle a 2 stage constant voltage charge at 14.5 volts for a 12 volt battery and 29.0 volts for a 24 volt battery and a float voltage of 2.20 – 2.22 volts per cell.

QC Avionix two-stage battery charger initially delivers up to 1.5 Amps and will taper down until the battery is fully charged. Upon reaching full charge the charger automatically switches to float mode. Float mode safely maintains the battery at full charge without overcharging. The charger can be left connected to a battery that can handle float voltages of 2.20 to 2.22 volts per cell indefinitely without damaging either the battery or the charger.

1. Start in the OFF/ Polarity Check / Reset Position:

Placing the control knob in the OFF/RESET/Polarity Check position activates “Polarity Check” to assure the battery cable is properly connected before turning on the charger. This position also RESETs the charger to initiate a charge cycle. Connect the battery cable to the charger after connecting the battery clips to the better allows you to safely connect to the battery without causing a potentially dangerous spark.

2. Polarity Check:

With the switch in the OFF/Reset/Polarity Check position, connect the battery clips to the battery being careful to connect the RED lead to the Positive (plus) side of the battery and the BLACK lead to the Negative (minus) side of the battery. Plug the battery cable into the matching connector on the lead coming from the control box. The Green light should come on.

If the Green light does not illuminate you have the battery connections reversed. (If the yellow light comes on you probably have more than one shorted cell.) Check the battery connections before you turn the charger on. Although there is protection circuitry in your charger prolonged reverse connection may damage your charger.

3. Charge Mode: After assuring the battery is connected properly, plug the charger into a 110-120 volt outlet and turn the control knob to the 12 or 24 volt position to match the voltage of the battery being charged.

4. Reading the Lights:

Light Pattern	Interpretation
Yellow	Battery Charging
Green	Battery Charged & is in Float Mode <i>(If your battery is low and the Green comes on quickly, your battery may no longer be capable of charging. Consult your mechanic.)</i>
Green AND Yellow	Deeply discharged battery. Green goes out as battery begins to charge.
Yellow and dim Red	Normal for first part of Charge Cycle
Yellow and bright Red	If Red remains bright - possible Shorted Cell. Consult you Mechanic.
Yellow and bright Red, switching to Green and repeating	One or more shorted cells. Consult your Mechanic.

- a. YELLOW light indicates the charger is in CHARGE mode. If your battery is charged, the GREEN light indicates the charger is in FLOAT mode. If the Green light does not illuminate after charging for the number of hours equal to the AMP-Hour rating of your battery, you probably have a shorted cell or bad battery. **Please consult your mechanic.**
- b. The RED light may illuminate dimly for a several minutes after turning on the charger. If the RED light stays fully illuminated for more than several minutes at least one cell in the battery is probably shorted internally and the battery may need to be replaced. **Please consult your mechanic.**

5. **Float:** Most low batteries will be fully recharged overnight. A fully discharged typical aircraft battery can take 24 hours to fully recharge.

After the battery reaches full charge the green light will illuminate indicating the charger is in float mode and the battery is fully charged. You can leave the charger connected to the battery in float mode.

To check that your battery is fully charged you can switch to RESET for a few seconds and turn the charger on again. The Yellow light should come on for a few minutes followed by the Green light.

6. **Disconnecting the Charger:** To avoid an accidental spark near the battery, turn the charger off or disconnect the battery cable from the charger before removing the battery clips.

Caution: Neither the wall transformer nor the charger box are weather proof and must be protected from the elements.

Accessory: EX 10, Extension cable with Anderson Power Pole connectors, 10 feet, \$24.95