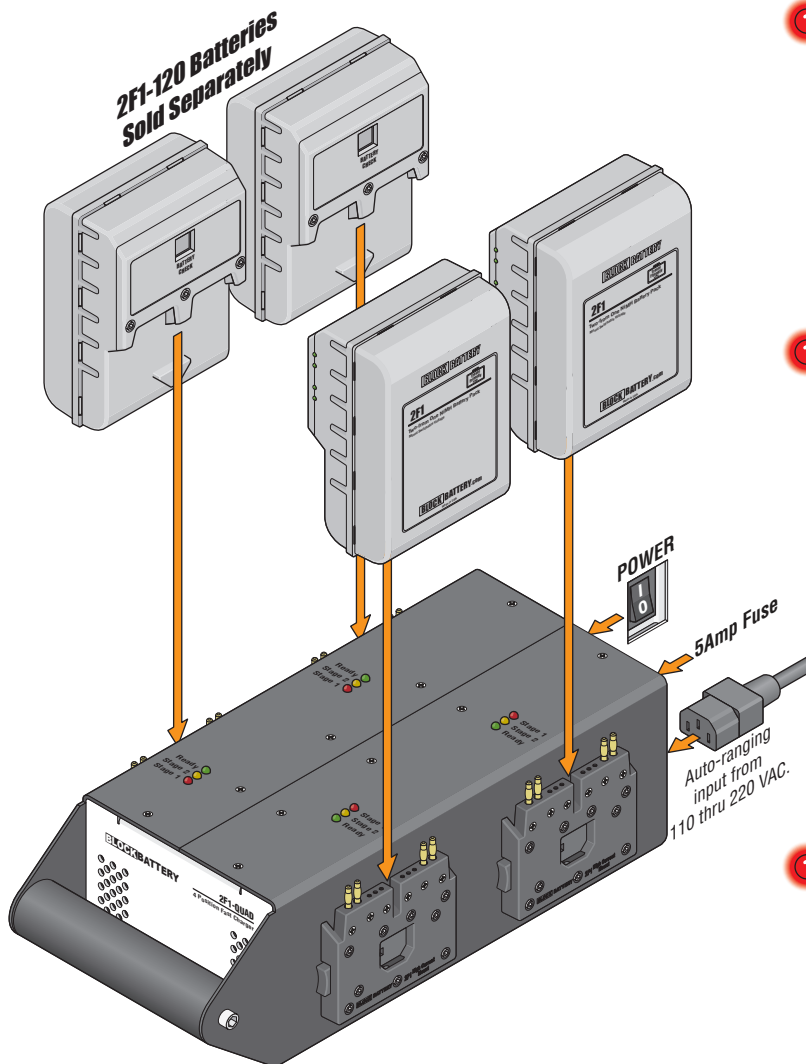


QUAD-Charger - Four Channel Fast Charger

The **Quad Charger** utilizes BlockBattery's advanced microprocessor system and multi-level charge routines to quickly & safely, qualify, initiate and terminate charging of nickel metal-hydride batteries. It is designed to simultaneously charge up to four 2F1-120 batteries. Each battery mount has 3 LEDs to indicate charging performance.



Quad Charger Specifications

Quad Charger Dimensions:

15.5" (39.4 cm) Length x 7.5" (19 cm) Width x 5" (13 cm) Height

Quad Charger Weight:

10 lbs (4.5 Kg) without batteries

Charging Operation

Turn power **ON**. Charger conducts a self-diagnostic check, **RED-YELLOW-GREEN** LEDs cycle on and off. **RED** LED remains **ON** after a successful diagnostic check. If otherwise, see **ERROR** conditions and indicators below.

Pre-Qualify (RED LED ON):

Connect desired battery(s) to charger. Battery fans turn on. Charger qualifies battery by checking battery's temperature, voltage, remaining power, and functional status.

If battery temperature is higher than 60°C (140° F), the charger will monitor cooling and then automatically go to fast charge when within range.

If the voltage and remaining power indicate a deep discharge or long-term storage, the charger will go into a prep-charge mode and then automatically go to fast charge when within range.

If the charger detects any battery functional errors, it will not charge, see **ERROR** conditions and indicators below.

Fast Charge (RED/YELLOW LEDs ON):

During the fast charge stage, the charger monitors multiple charge termination indicators (See "Fast charge termination reasons" listed below) and continues operational diagnostics. Battery output connectors and LCD are disabled while charging. Battery fans remain ON.

Charge time is approximately 1.5 hours for two 2F1-120 batteries, **OR** 5.5 hours for four 2F1-120 batteries, but can be less for partially discharged 2F1-120 batteries.

Recommendation: For best long-term performance, avoid interrupting charge cycle during fast charge.

Fast charge termination reasons:

1. Delta Temp/Delta Time ($\Delta T/\Delta t$)
2. Negative Delta Voltage ($-\Delta V$)
3. 16 hours of charging time has been completed but battery is **NOT** fully charged. Battery life cycle may have been reached (Please contact technical support).
4. Battery temperature rises above 60°C (140°F). Normal charging temp is 10°-38°C (50°-100°F).

Ready to Use (RED/YELLOW/GREEN LEDs ON):

Charge cycle is complete. Disconnect battery(s) for use. Or leave battery(s) connected to charger for up to a week. The charger will continue in a maintenance mode.

Caution: Avoid "top-off" charging a full battery just before use. This is **UNNECESSARY** and could elevate the voltage above equipment operating ranges and/or damage equipment being powered.

ERROR conditions (LEDs will light)

Charger will automatically STOP charging if:

- RED** and **GREEN** LEDs flashing indicates that charge current has been interrupted.
 - Check GREEN LEDs on 2F1 by pressing BATTERY CHECK button on back of 2F1 battery.
 - If 2F1 battery LEDs appear okay, but error condition still exists, then please contact technical support.

- YELLOW** LED flashing indicates that charger failed a self-diagnostic check and cannot be used. Please contact technical support.

For technical support call:

1-888-424-6322