

Lithium-Ion Smart Battery Charger

User Instructions- Model No. LBC-10.8-3

Revision 1.5



This manual contains proprietary information intended solely for use with the REI Lithium-Ion Battery Charger.

Information contained in this manual including product operation and specifications is subject to change without notice.

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Precautions

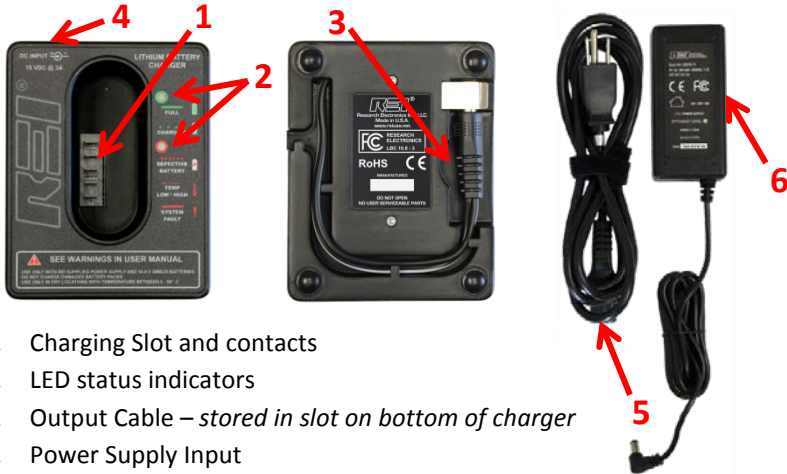
Smart Battery Charger

- Only use REI approved 15 VDC @ 3.0 A power sources with the battery charger
- The REI Smart Battery Charger should only be used to charge REI supplied SMBus Lithium-Ion batteries.
- There are no serviceable parts inside the battery charger. Contact your dealer or Research Electronics International, LLC for repairs. Opening the unit will void the warranty.
- Using the battery charger in a manner not specified by this user's guide may impair the protection provided by the equipment.
- CAUTION: There is risk of fire or explosion if Li-Ion battery is replaced by an incorrect type.
- Do not use the battery charger to recharge non-rechargeable, non Li-Ion batteries.
- The REI Smart Battery Charger is designed for indoor use with temperatures between 0-50° C. Do not allow the charger to be used in explosive environments or come into contact with water or other liquids.

Li-Ion Batteries

- For your own safety do not use any ORION battery if:
 - The battery case is cracked or otherwise damaged.
 - The battery is excessively hot or warm for any reason.
- Avoid shorting the battery, immersing in water, or exposing to fire. Also, avoid excessive physical shock or vibration.
- Only use the specified REI battery chargers or products to charge REI batteries
- There are no serviceable parts inside the battery. Contact your dealer or Research Electronics International, LLC for repairs. Opening or puncturing the unit can be dangerous and may result in injury.
- Using the Lithium-Ion batteries in a manner not specified by this user's guide may override the equipment's built-in protection mechanisms.
- Keep out of reach of children.
- Dispose of Lithium-Ion batteries in accordance with local regulations.

Equipment Description



1. Charging Slot and contacts
2. LED status indicators
3. Output Cable – stored in slot on bottom of charger
4. Power Supply Input
5. AC Power Cord
6. Power Supply Adapter – If you received this charger with the ORION or OSCOR, the same 15 VDC @ 3.0 A Power Supply Adapter used to power your product is also used to power the battery charger.

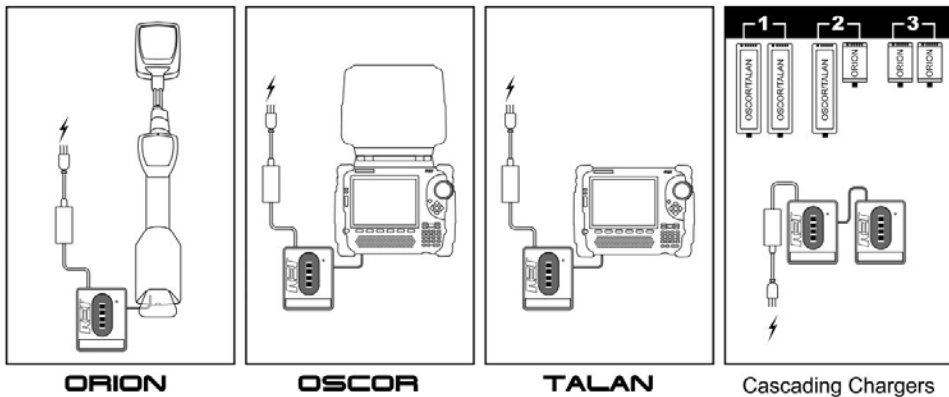
Setup and Basic Operation

Charging a Single Battery

1. Connect Power Supply output to the input on the charger. Plug the Power Supply Adapter into an AC supply (100-240V, 50/60Hz)
2. Place battery needing charge into charging slot of the charger observing proper contact alignment. Charging will begin automatically.
3. The LED status indicators will provide information regarding the charge status.

LED Status Indicators

- Green LED flashing short pulses (.) – indicates the battery is charging
- Green LED solid (_____) – indicates that battery has reached full charge (> 95%)
- Red LED flashing short pulses (.) – indicates a defective battery
- Red LED flashing an alternate pattern of short and long pulses (. _ . _ . _ .) - indicates that battery temperature is either too low or too high. Reduced charge rate may occur until the battery returns to normal operating temperatures (0-50 degrees Celsius)
- Red LED solid (_____) – is an indication of low input voltage or that a system fault has occurred.



Cascade Charging

Two battery chargers can be serially-connected together to automatically charge two batteries. As one battery finishes charging, the second battery will automatically begin charging. This is known as cascade charging.

1. To use cascade charging, connect the output cable of the charger to the power supply input of another charger or to the power supply input of an ORION, OSCOR, or TALAN unit. The first charger in the chain must be connected to an AC power supply (100-240V, 50/60Hz).
2. Charging will begin automatically with the unit furthest from AC power. As it begins requiring less power to complete its charge, the first unit in the chain will automatically begin charging.

Depending on the size of the battery you are charging and the amount of current required, the charge time required for cascade charging will vary.

Battery	Single Battery Charge Time	Cascade Charge Time (2 Batteries)
ORION Battery (REI Part #R-00001)	2 hrs	2 hrs
TALAN/OSCOR Battery (REI Part #O-RB250)	2 hrs 35 mins	4 hrs 50 mins

Additional power supply adapters and chargers can be purchased from REI to charge batteries simultaneously.

15V Power Supply Adapter – REI Part #0-RC600

US Power Cord – REI Part #0-BD500

European Power Cord – REI Part #0-BD505

Lithium Ion Smart Battery Charger – REI Part #9-00015

Specifications

AC to DC Power Supply (supplied)*

- AC Power Requirements
 - o AC Input: 100-240V, 50/60Hz
 - o DC Output: 15VDC @ 3A

Smart Battery Charger

- Input Voltage: 15VDC @ 3A
- Output: Automatically adjusts to SMBus battery requirements. 3.5A max
- Operating Temp: 0-40 deg C
- Dimensions: 3.0" x 3.75" x 1.25"
- Weight: 1 lb (with AC Power Supply)

ORION Rechargeable Lithium-Ion Battery

- RRC Power Solutions Part Number: RRC2040
- REI Part Number: R-00001
- Charging Time: 2 hrs

OSCOR/TALAN Rechargeable Lithium-Ion Battery

- Inspired Energy Part Number: NI2040HD24-10.8V
- REI Part Number: 0-RB250
- Charging Time: 2 hrs 35 min

* For reliable safe operation, use only REI specified or included power supplies and cord sets.

CE Declaration of Conformity

Manufacturer's Name: Research Electronics International (REI)
Manufacturer's Address: 455 Security Drive, Algood, TN 38506 USA
Equipment Description: Lithium-Ion Smart Battery Charger
Equipment Model Designation: LBC-10.8-3

Referenced Directives:

LVD (Low Voltage) Directive 2006/95/EC, EMC (Electromagnetic Compatibility) Directive 2004/108/EC

Referenced Standards:

LVD Standards EN 60950-1 (06)
EMC Standards EN55022 (10), Class A, EN61000-3-2 (06) +A1(09)+A2(09), EN61000-3-3(08)+A3(06), EN55024(11)



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