


Liberating Technologies, Inc.

BC100 Lithium Battery Charger



The Liberating Technologies' BC100 (model C) Lithium Battery Charger shown above is intended for use with LTI built-in lithium batteries for powered prosthetic systems. This microprocessor-based "smart" charger evaluates the battery as it charges it. This is a voltage-regulated, current-limited charging system with an additional safety feature – elapsed time shut-down. The charge rate is adjusted throughout the charge cycle to safely optimize the effectiveness of the charge and to prolong the life of the battery. This charger is certified by Underwriters Laboratories (UL) in the United States and Canada and also meets the requirements for the  mark in Europe.

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Battery:

This charger is designed for use with LTI's 250 & 450 mAh, nominal 7.4 volt built-in lithium batteries* (BP101 & BP103). These batteries are ideal for all trans-radial prosthetic systems and for some trans-humeral applications and powered shoulder locks. They have adequate capacity to operate a multi-device prosthesis (i.e. hand & wrist rotator) for an entire day, with enough reserve capacity to operate longer if necessary. And yet, they are relatively small and light-weight. Larger capacity batteries would require the user to carry more weight and bulk than necessary and generally should be avoided. They can be regulated to nominal 5 volts for use with Otto Bock 2000 series pediatric prosthetic hands.

Charging:

The BC100 Lithium Battery Charger charges lithium batteries rapidly; 80% in the first hour and 20% in thereafter. Depending on the initial state of charge, users can recharge their prosthetic battery in less than two hours. And since lithium batteries do not have a "memory" problem like nickel-cadmium batteries, they can be "topped-off" when ever it is convenient. It is recommended however, that they be charged regularly and most users find it convenient to charge them every night.

When connected to a wall outlet (100-240 volt, 50-60 Hz) with the appropriate power cord, the charger's indicator light will illuminate GREEN indicating that the charger is powered-up. Insert the charger's plug into the recharge receptacle on the prosthesis or on the battery. Once the charger identifies the presence of a battery, it will evaluate the state of charge and then set an initial charge rate (maximum 200 mA). The indicator light will switch to RED during charge cycle. When the battery is fully charged, the indicator light will change from RED back to GREEN.

If, upon connecting the battery to the charger, the indicator light remains GREEN, this indicates that the battery is sufficiently charged. The charger can be reset by disconnecting from the wall outlet and then reconnecting. If a lithium battery's safety circuit has shut down to protect the battery, it can be reset by connecting it to this charger.

Charge Indicator:

<u>indicator</u>	<u>condition/status</u>
green	charger powered ON
red	charging in progress
green	battery fully charged

Specifications:

Input: 100-240 volts, 50-60 Hz, max 0.3A

Output: 200 mA, 8.4 volts

** CAUTION - the BC100 Charger is not to be used with any other battery chemistry or capacity!*

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