

CELECTRA™ 80W *Elite* INSTRUCTION MANUAL

AC/DC Multi-Chemistry Charger (EFLC3025)

Included Items
JST_XH Balance adapter
JST_Thunderpower Balance adapter
Banana plug to EC2 battery adapter
Banana plug to EC3 battery adapter
Banana plug to JST battery adapter
Banana plug to Futaba® battery adapter (with slot)

Minimum computer requirements for use of included software: Microsoft® Windows XP® or Windows Vista® operating system, Compact disk (CD) reader capable of reading a mini-CD and USB 2.0 port. Microsoft®, Windows XP® and Windows Vista® are registered trademarks of the Microsoft Corporation.

Futaba is a registered trademark of Futaba Denshi Kogyo Kabushiki Kaisha Corporation of Japan.

Specifications

The following specifications are standard on your CELECTRA 80W Multi-Chemistry AC/DC Battery Charger:

- AC Input Voltage: 100-240VAC (50/60Hz)
- DC Input Voltage: 11-18VDC
- Charge Current: 0.10 to 6.0A (in 0.1 A increments/80W maximum)
- Discharge Current: 0.10 to 2.0A (in 0.1 A increments/10W maximum)
- Operating temperature: 0°C to +50°C
- Balance Current Drain: 300mA per cell
- Trickle Charge Current: 50 to 200mA
- Charging Mode: Peak (Ni-Cd/Ni-MH), CC/CV (Li-Po/Li-Ion/Li-Fe/Pb)

WARNING:

Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

- NOTICE:** Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.
- CAUTION:** Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.
- WARNING:** Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit horizonhobby.com and click on the support tab for this product.

OPERATING YOUR CHARGER

SELF TEST AND PROGRAM SELECT SCREENS

When the charger is powered on, there is a series of self tests and the screen will show the charger brand name and model number. After self tests, the charger shows another screen (information may vary).



Press Mode key to change among 7 main menu screens.



LITHIUM BATTERIES

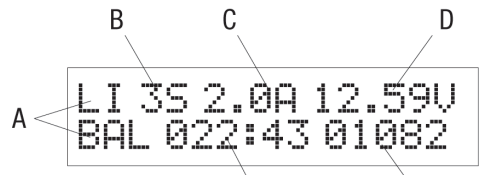
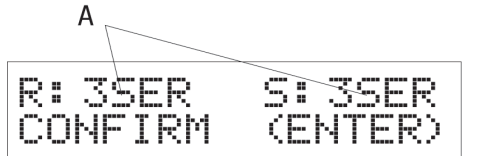
Press Mode key to change among 7 main menu screens and go to PROGRAM SELECT Li-Ion (or Li-Fe) BATT screen. This is the menu in which you set the standard Lithium battery charge parameters.

NOTE: The Lithium battery type (Li-Po, Li-Ion or Li-Fe) chosen at USER SET setup shows on this screen. Change Lithium battery type as needed in the USER SET menu (Li V. TYPE screen).



LITHIUM BATTERY CHARGING

Press Dec or Inc key to go to one of the control screens (CHARGE, BALANCE, FAST CHG, STORAGE or DISCHARGE) to do what your battery needs. Correctly connect your lithium battery to the charger (charging connector first and balancing connector second). Press the Enter key and adjust charging parameters as needed. Press and hold the Enter key (approximately 3 seconds) until the screen changes to start the battery check / charge sequence. When the charge cycle starts, the charger compares the battery to charger settings. The screen will show battery and your setting information. If the information after R: (charger) and S: (settings) (item A) does not match, press the Mode key and change lithium battery charging parameters as needed. If the R: information matches S:, press the Enter key to confirm. After confirmation, charging starts and information will show on the LCD screen (information may vary) (see lettered items below).



- A. A Li-Po battery pack is balance charging LI BAL
- B. Battery pack has 35 cells in series 3S
- C. Charging rate is 2.0A (2000mA/h)
- D. Voltage being applied to the battery is currently 12.59V
- E. Present charge level of the battery is 1082mAh
- F. Time elapsed since the charge process started is 22:43 (22 minutes and 43 seconds)

During charging, the Dec key can be pressed to show several parameter messages on the LCD screen including: End Voltage, Capacity Cut-off, Safety Timer setting, Temperature Cut-off and Input Power Voltage. Press INC to see charge for each cell and DEC to return to the Charge Monitor screen. The charger signals when the charging (or discharging) process is complete (if Buzzer is set to ON).



CHARGING

CAUTION: The Li-Po/Li-Fe/Li-Ion charge program menus are to be used ONLY for the charging and discharging of Lithium battery packs. The charging of other battery types using the Li charge programs will result in damage to the battery and perhaps the charger.

CAUTION: If at any time during the charge process the battery pack(s) become hot or begin to puff/unplug the battery immediately and discontinue the charge process as batteries can cause fire, collateral damage and injuries. Press Mode key to return to the main menu, then press the Mode key again until you see the PROGRAM SELECT Lithium battery screen.

NOTE: Make sure you the correct lithium battery type is shown for the battery you want to charge. If not correct change the setting for the lithium battery type in the USER SET menu (Li V. TYPE screen).

CAUTION: Also consider the battery pack's series cell count (i.e. 2S, 3S, 4S, etc.) as the voltage of the pack being charged will affect the available charge current in order to not exceed the 80 Watt maximum output limit of charger. Using a charge rate that is not compatible with the battery capacities may result in damage or malfunction of the charger or batteries.

Safety Precautions and Warnings

WARNING: Failure to exercise caution while using this product and comply with the following warnings could result in product malfunction, electrical issues, excessive heat, FIRE, and ultimately injury and property damage.

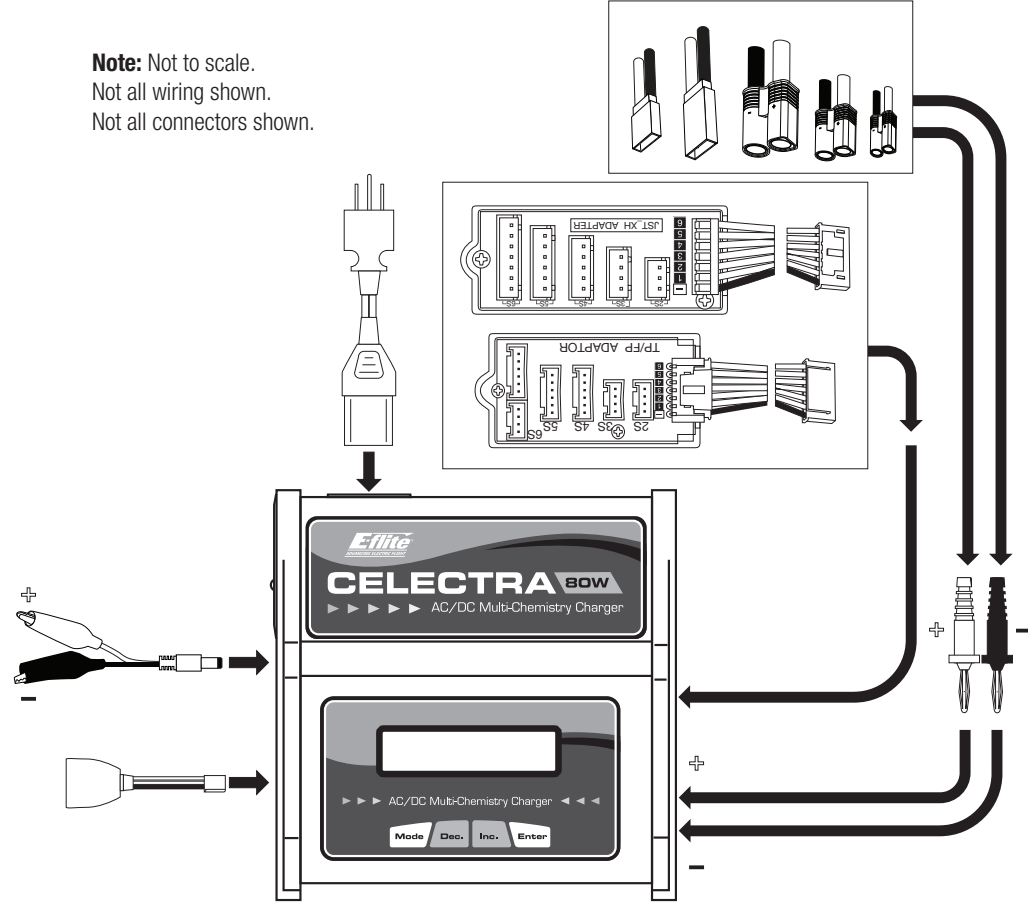
- Never leave the power supply, charger and battery unattended during use.

- Never attempt to charge dead, damaged or wet battery packs.
- Never attempt to charge a battery pack containing different types of batteries.
- Never allow minors to charge battery packs.
- Never charge batteries in extremely hot or cold places or place in direct sunlight.
- Never charge a battery if the cable has been pinched or shorted.
- Never connect more than one battery pack to this charger at a time.
- Never connect the charger if the power cable has been pinched or shorted.
- Never connect the charger to an automobile 12V battery while the vehicle is running.
- Never attempt to dismantle the charger or use a damaged charger.
- Never attach your charger to both a AC and a DC power source at the same time.
- Never reverse the positive and negative terminals.
- Never connect the input jack (DC input) to AC power.
- Always use only rechargeable batteries designed for use with this type of charger.
- Always inspect the battery before charging.
- Always keep the battery away from any material that could be affected by heat.
- Always monitor the charging area and have a fire extinguisher available at all times.
- Always end the charging process if the battery becomes hot to the touch or starts to change form (swell) during the charge process.

- Always connect the charge cable to the charger first, then connect the battery to avoid short circuit between the charge leads. Reverse the sequence when disconnecting.
- Always connect the positive red leads (+) and negative black leads (-) correctly.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always terminate all processes and contact Horizon Hobby if the product malfunctions.

WARNING: Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in the wrong mode. Failure to comply may result in excessive heat, fire and serious injury.

CAUTION: Always ensure the battery you are charging meets the specifications of this charger and that the charger settings are correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage. Please contact Horizon Hobby or an authorized retailer with compatibility questions.



GETTING STARTED

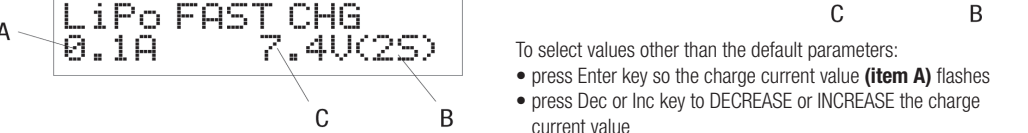
CAUTION: Never connect the AC and DC input cords to an active power source at the same time. This will void the warranty, cause product damage and possibly injure the user.

When Using External DC Power Source:

- Make sure the power supply's rocker switch side marked with a circle (O) is pushed in, which is OFF.
 - Attach the banana plugs of your charger's DC power input cable to the power supply's banana plug jacks. Make sure you put the positive (+) red cable in the red (+) jack. Make sure you put the black common or negative (-) cable in the black (-) jack.
 - Always connect the positive red leads (+) and negative black leads (-) correctly.
 - Always disconnect the battery after charging, and let the charger cool between charges.
 - Always terminate all processes and contact Horizon Hobby if the product malfunctions.
- NOTICE:** Always connect cable polarities correctly. Attach the AC power cord to the power supply. Make sure the cord plug is full seated in the socket, then connect the AC power cord to an appropriate power socket.
- NOTICE:** Always consult 12V battery collateral materials or Horizon Hobby before using with sources other than standard AC wall outlet.

Fast Charge

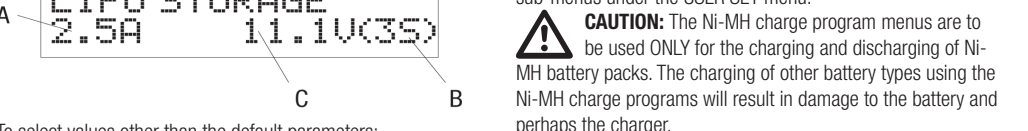
Near the end of a standard charging cycle the charger switches from Constant Current (CC) mode to Constant Voltage (CV) mode to slowly "top off" the current in the battery pack as close as possible to the maximum capacity. In Fast Charge the CV mode is eliminated in order to greatly shorten the charging time; however, the final capacity of the battery will be less than what you would get using the standard charge method.



- To select values other than the default parameters:
- press Enter key so the charge current value (**item A**) flashes
 - press Dec or Inc key to DECREASE or INCREASE the charge current value
 - press Enter key again to save the charge current and pack voltage value (**item C**) flashes
 - press Dec or Inc key to DECREASE or INCREASE the charge current value
 - press Enter key again to save the charge current and the pack voltage (**item C**) flashes
 - press Dec or Inc key to DECREASE or INCREASE pack voltage (and # of cells in series (**item B**))
 - press Enter key again to save the pack voltage value

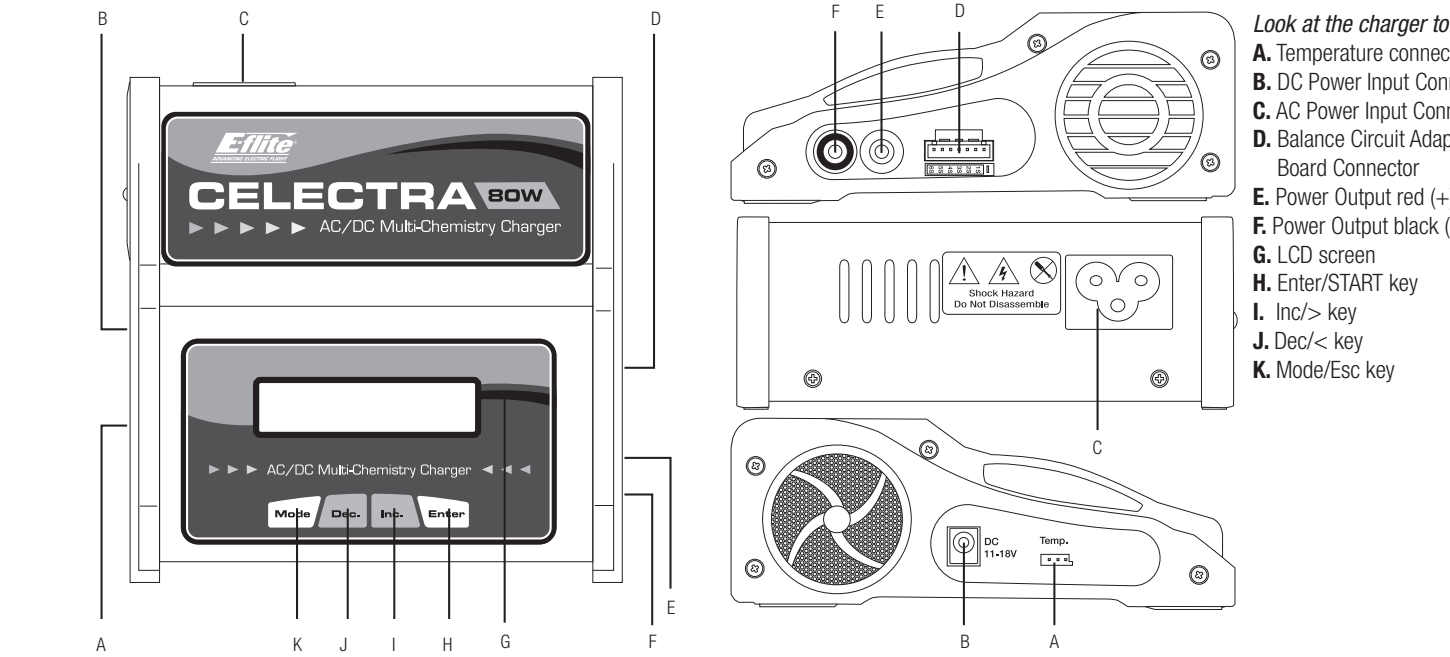
Storage

If you don't plan on using your battery for a long time it is best to charge (or discharge) the battery to its optimal storage voltage and capacity. These voltage values are different for Li-Po (3.85V), Li-Fe (3.3V) and Li-Ion (3.75V) battery packs. Using Storage charge the charger will automatically charge or discharge (depending on the current charge level) the battery to an appropriate level.



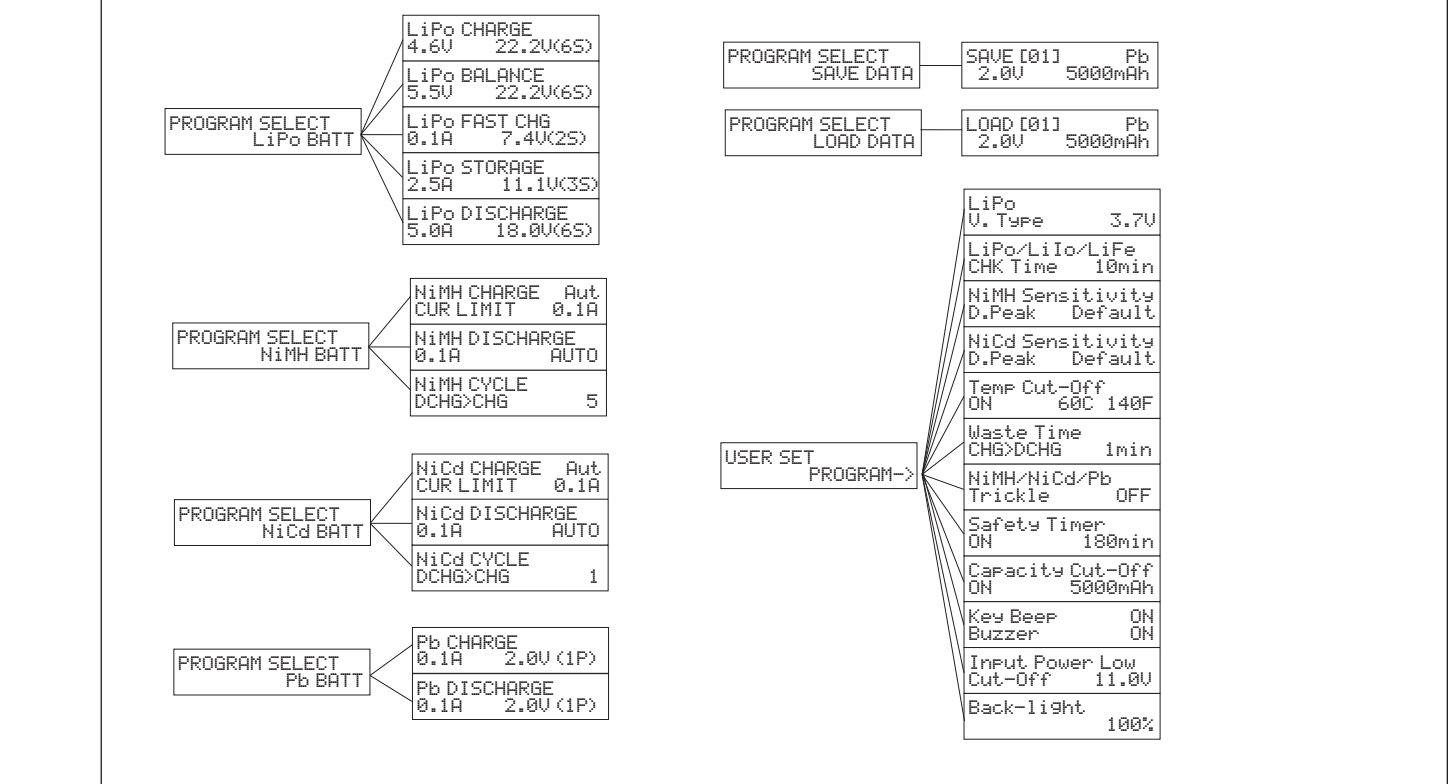
- To select values other than the default parameters:
- press Enter key so charge current parameter (**item A**) flashes
 - press Dec or Inc key to DECREASE or INCREASE the charge current value
 - press Enter key again to save the charge current and the pack voltage value (**item C**) flashes
 - press Dec or Inc key to DECREASE or INCREASE the pack voltage value (and # of cells in series (**item B**))
 - press Enter key again to save the pack voltage value

NOTE: Make sure you the correct lithium battery type is shown for the battery you want to charge. If not correct change the setting for the lithium battery type in the USER SET menu (Li V. TYPE screen).



PROGRAMMING GUIDE

Press the Mode key (K) to change among main menu screens or to get to these main menu screens from a submenu screen. Press the Enter key (H) to get to submenus for adjusting operating parameters, to save value changes, or to start chosen battery charging actions. Press the Dec (J) or Inc (I) keys to change between submenu screens or to change (Decrease or Increase) screen values.



PLEASE TURN PAGE FOR MORE INFORMATION

