CELECTRA™

1-3 Cell Li-Po Charger

Instructions



E-flite™

Warning: Please read these instructions and safety precautions before charging or using Lithium Polymer (Li-Po) batteries. Always read manufacturer's instructions included with your batteries.

Thank you for purchasing the E-flite™ Celectra™ 1–3 cell Li-Po charger. The Celecrta is a DC-powered charger meant only for 1-, 2- or 3-cell (3.7V–11.1V) lithium-polymer (Li-Po) battery packs and features a microchip CPU controller with a LED to display the charge status. It also precisely follows standard Li-Po charger algorithms. This programmed set of charging rules tells the charger to increase the voltage of the Li-Po cell to 4.2V (per cell). While the voltage is rising, the current is precisely kept at one of the preset rates (either 250mA, 500mA, 1A, 1.5A, or 2A). Once the maximum cell voltage is reached (at which point the battery is 80–90% charged), the charger steadily maintains a constant voltage, while the current decreases until terminating the charge.

Features

- Selectable between 1-, 2-, or 3-cell Li-Po packs
- Automatically detects incorrect cell count selection
- 250mA, 500mA, 1A, 1.5A, and 2A selectable charge rates
- Reverse polarity protection on input and output
- Simple single push-button operation
- Red LED charge status indicator
- Audible beeper indicates power and charge status
- Input leads include banana plugs and alligator sleeves
- Banana output jacks w/included JST (BEC) charge lead

Specifications

- Input power: 12V DC
- Charges 1–3 cell Li-Po packs greater than 250mAh only
- Selectable charge rates: 250mA, 500mA, 1A, 1.5A, and 2A

Safety Precautions

Lithium Polymer batteries are volatile. Failure to read and follow these instructions and safety precautions may result in fire, personal injury and damage to property if batteries are charged or used improperly. Horizon Hobby, Inc. and its retailers assume no liability for failures to comply with these instructions and precautions.

- Do not leave the battery and charger unattended while in use.
  IMPROPER CHARGING OF Li-Po BATTERIES COULD RESULT IN FIRE
- Never charge around or in the area of any flammable or combustible materials. The safest place to charge is on a concrete surface or a fire safe container.
- When charging, constantly monitor the temperature of the battery pack. If the battery becomes hot to the touch, discontinue the charging operation immediately by disconnecting the battery pack.
- Do not allow children to charge battery packs unless supervised by a responsible adult.
- The charger can become hot during charging. Use care when selecting where you will charge the battery packs.
- This charger is DC only.
- PLEASE NOTE (+) (-) CANNOT BE CONNECTED INVERSELY.
- The charger will not operate if the supply voltage is below 10V.
- This charger is designed for lithium-polymer batteries only. It MUST NOT be used to charge Ni-Cd and Ni-MH battery packs.
- Maximum charging rate of the Li-Po battery should not be set to over 1x capacity. Ideal charge rate is approximately .7x the capacity of the pack.
- Let the battery cool down to ambient temperature before charging.
- Please check power source or output to make sure they are connected properly. The charger will not operate if either is connected incorrectly.
- If at any time you see a battery starting to balloon or swell up, discontinue charging process immediately. Batteries in this condition may leak, and the reaction with air may cause the chemicals to ignite, resulting in fire. Disconnect the battery from the charger and observe it in a safe place for approximately 15 minutes. A battery in this condition should not be reused. Consult the battery manufacturer for the proper disposal procedure of the battery.
- Do not charge battery packs in series. Charge each battery pack individually. Failure to do so may result in incorrect battery recognition and charging functions. Overcharging may occur and fire may be the result.

Supplying DC Power to the 1-3 cell Li-Po charger

The Celectra™ 1–3 cell Li-Po charger is powered by connecting it to a 12V power source, such as a 12V sealed battery (HAN102), a 12V automobile battery (car must be not be running), a field box power panel or appropriate power supply. The battery capacity must be over 5Ah.
The charger includes two different methods of connecting the charger to your power supply. Use the option best suited for your application.

- Banana connectors for use with power supplies
- Alligator sleeves for use with 12V sealed batteries, automobile batteries or power supplies

Step 1: Attach the red (positive) banana plug to the red (positive) terminal on your 12V power source. Attach the black (negative) banana plug to the black (negative) terminal on your 12V battery or power panel.

Step 2: Slide the alligator sleeves onto the banana connectors. Attach the black (negative) banana plug to the black (negative) alligator clip, and red (positive) banana plug to the black (negative) alligator clip. Attach the red (positive) alligator clip to the red (positive) terminal on your 12V battery or power panel, and the black (negative) clip to the black (negative) terminal.

Once your charger is given power, it will **beep once**, and the LED will light up momentarily to indicate the charger is receiving power.

Charging Process

Step 1: Connect the battery to the charger. The charger will signal the connection of the battery by producing **one long beep**. The LED will also flash once indicating the connection of the battery.

Step 2: Refer to the chart below for recommended charge rates. Select the appropriate charge rate for your particular battery.

Step 3: Select the proper number of cells that you will be charging, 1-, 2-, or 3-cells. Remember that a 1-cell pack is 3.7V, a 2-cell pack is 7.4V, and a 3-cell pack is 11.1V. It is very important that you select the correct number of cells. Failure to comply may result in fire.

Battery Capacity	Charge Rate
250mAh–500mAh	250mA
500mAh–1000mAh	500mA
1000mAh–1500mAh	1A
1500mAh–2000mAh	1.5A
2000mAh or greater	2A

Step 4: Attach the output charge lead to the banana plug jacks on the charger. The red (positive) banana plug lead wire plugs into the red (positive) jack on the charger. The blacks (negative) lead plugs into the black (negative) jack on the charger.

Step 5: Plug the connector on the end of the charge lead to the LiPo battery pack. The beeper will **sound once** and the LED will begin flashing.

Step 6: Push the Start button once. You will hear a **short beep**, and the LED will remain on continuously to indicate the battery is charging.

Note: Do not adjust the charge rate switch in this state.

Note: This charger is designed to automatically detect cell count selection errors as an added safety feature. If the wrong cell switch selection is chosen for a 1-, 2-, or 3-cell pack and the start button is pushed the beeper will **beep twice** followed by **three beeps continually**. The charge function will not proceed until the correct number of cells is chosen. To correct this, simply move the cell selection switch to the match the correct number of cells connected and the charger will automatically commence charging. The above is true for cell selections over and under the correct cell count.

Step 7: When charging is complete, the charger will emit ten **triple-beeps** and then the LED will continuously flash.

Note: A few seconds prior to the end of the charge process, the LED display goes through a series of flashes, indicating the charge cycle is nearly complete.

The charger is now in trickle charge. The beeper will sound every 45-60 seconds until the battery is disconnected. Do not leave the battery connected to the charger when charging is complete. Failure to comply may result in fire.

Step 8: Push the Start/Select button to process any further charge function if necessary.

WARNING: SELECTING A CHARGE RATE HIGHER THAN 1X BATTERY CAPACITY MAY RESULT IN FIRE.

Forced Charging Feature

When the voltage is too low on a single cell battery, some chargers may not charge the battery because the voltage is below an acceptable minimum voltage, thus not recognized by the charger. You can bypass this by selecting 1-cell on the charger and pushing the START button and holding it for three seconds. The beeper will sound twice and the charger will be forced to charge for two minutes. After two minutes, it will estimate the voltage again and begin the charging process if the voltage has been brought up to an acceptable minimum voltage.

Warranty and Repair Policy

The Celectra™ 1–3 cell Li-Po charger is guaranteed against workmanship and manufacturing defects for a period of two years from the original date of purchase. This warranty is limited to the original purchaser of the charger and is not transferable. Warranty repair will not cover units that have been modified, misused or serviced by an unauthorized service center. To speak to a service technician, call (877) 504-0233.
If your charger needs to be repaired, ship the charger in its original box (freight prepaid) to:

Horizon Service Center
Attn: E-flite™ Service Center
4105 Fieldstone Rd.
Champaign, IL 61822

Include your complete name and address information inside the carton, as well as clearly writing it on the outer label/return address area. Include a brief summary of the difficulty. Date your correspondence and be sure that your name and address appear on this enclosure. Also, please include a phone number where you can be reached during the business day.

Warranty Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Providing that warranty conditions have been met, your charger will be repaired free of charge.
Warranty does not cover collateral damage.

Non-Warranty Repairs

Should your repair cost exceed 50% of the retail purchase cost, you will be provided with an estimate advising you of your options. Any return freight for non-warranty repairs will be billed to the customer. For non-warranty repairs, please advise us of the credit card that you prefer to use. Horizon Service Center accepts Visa or MasterCard. Include your card number and the expiration date. Horizon Service Center also accepts money orders.