



Operating Instructions

CHARGER BECLV v1.0

Battery Eliminator Circuit for 2S~6S LiPo battery packs



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Thanks for your purchase of the Chargery BEC Battery Eliminator Circuit. The product offers high power, small size and incredible flexibility to all who wish to power their receivers and servos directly with the motor batteries. The BEC takes input voltage up to 25V (6S) and steps it down to a user-selectable voltage, and withstand high current loads of 10Amps continuous. The Chargery BEC is a glitch free high efficiency, high power switching voltage regulator designed to work with all popular brands of 2.4 GHz R/C receivers and servos. It provides safe and consistent power to your R/C receiver and servo(s) that eliminates the need for a separate battery source.

The Chargery BEC will boost performance on your R/C model by reducing the overall weight while maintaining a high current output from high voltage sources up to a 6S LiPo battery (25.2V). It is ideal for today's more demanding R/C aircrafts equipped with digital servos that require even higher current demands without sacrificing with additional weight.

Please read the entire manual before proceeding. Before installation, be sure your radio system uses center red or positive receiver/servo connections.

Features:

- High efficiency 5.4V, 5.9V, 7.4V and 8.4V selectable output voltage.
- Wide input voltage range from 6V to 25.2V (2S to 6S LiPo Cells). Minimum 10V input for 8.4V applications.
- High current capability of up to 10Amps continuous, 15Amps peak at input under 12V, 8Amps continuous, 12Amps at input under 25V.
- High power output that handles multiple servos including digital servos.
- Built-in Current and Thermal overload protection.
- **Short circuit protection output**
- Ideal for R/C model 2.4GHz radio systems.
- Impact design: L43*W25*H10mm.
- Weight: 25g excluding wires

Package Contents:

- Chargery CPBECLV unit: 1pcs
- User Instruction Manual: 1pcs

CAUTIONS

1. Never reverse the polarity from battery to Chargery BEC input wires
2. Do not extend the output power wire. If extending the output wire, replace the output wires with a thicker gauge to prevent voltage drops from the wire. If need, extending input wires is better than extending output wires.
3. Always perform a transmitter/Receiver range check on first installation the BEC, and whenever components or component are changed.
4. After landing disconnect battery pack from ESC, and BEC from Battery pack in time.
5. Check the condition of all wires and connectors in your power system regularly to insure good condition.

The servo load ratings for the BEC assume servos which are average in current drawn at idle and under load, which are in good condition, and which are operating non-binding control surfaces. If necessary, replace servos and/or repair control surface before flight to insure reliable operation. Note the servos vary widely in their specifications. Depending on your servos, you may be able to use fewer or more servos. Operate the model's control surfaces on the ground and check temperature of BEC. If cool to just warm, perform a short test flight and check temps again. If any part of BEC is uncomfortably warm to the touch after the short test flight, you may need to examine your setup. If cool to the touch, you may be able to use more servos, or use BEC 7.4V or 8.4V setting if the high voltage operation is supported by your servos.

WARNING!

DO NOT OPERATE THE CHARGER BEC AT 10A CONTINUOUSLY WITHOUT DIRECTED FORCED AIR VENTILATION.

Installation

1. Power Connections

Please disconnect the battery from its terminal before soldering the power connections.

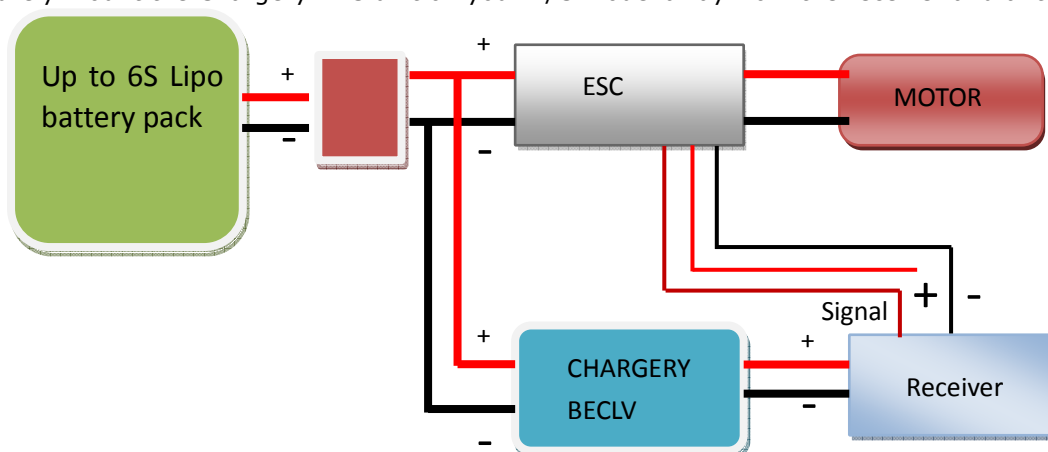
Connect the Chargery BEC open input power wires by soldering the Red power wire to the positive (+) terminal of battery pack. Solder the Chargery BEC Black power wire to the negative (-) terminal of the battery pack.

2. Plug the Chargery BEC voltage output plugs into the battery slot and/or an available slot of the receiver. Both output plugs of the Chargery BEC is recommended to be used to prevent voltage drops through the plugs, when large current loads are applied. Make sure the polarity is matching with the receiver slot before inserting the Chargery BEC plug black wire negative (-) and red wire positive (+). Connect the ESC signal connection to Rx with the positive red wire removed

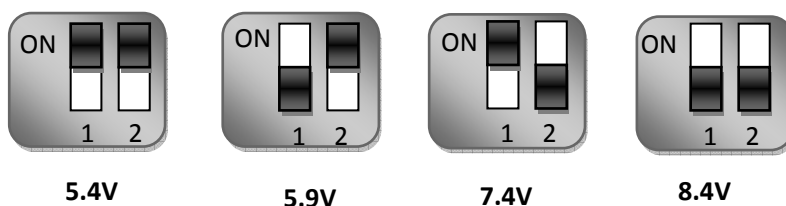
3. **WARNING!** Under heavy continuous current load for several minutes, the Chargery BEC unit will get extremely hot and cause burns when touched. Allow unit to cool before handling.

CAUTION! Long duration of current loads of 10A continuous must be used cautiously with forced cooled air ventilation directed at the Chargery BEC. Ideally place the Chargery BEC unit close to the aircrafts propeller for ventilation.

Securely mount the Chargery BEC unit on your R/C model away from the receiver and antenna.

**Setup:**

1. With the Chargery BEC unit installed and required servo(s) connected, turn on the transmitter with a minimum throttle level without the battery connected.
2. Before connecting the battery to the circuit, please ensure that the proper output voltage settings are set for your particular application. To set the Chargery BEC to output 5.4V, 5.9V, 7.4V or 8.4V, set the switch settings on the Chargery BEC unit as shown below respectively.

**CAUTION!**

It is recommended to double check the output voltage with a voltmeter to ensure proper voltage selection. Do not switch the voltage selection when power is applied, power must be disconnected before changing the voltage selection. Doing so may damage the unit and connected loads.



3. Make sure your transmitter has the throttle off before continuing. Now connect the fully charged battery into the circuit.

Note: It is required to use a battery pack with a minimum of either 3 LiPo or 8 NiCd/NiMH cells, 4 LiPo cells for 8.4V operation.

4. The LED on the Chargery BEC unit should turn on.
5. Now the Chargery BEC is actively powering the RC receiver and servo(s). To further isolate noise from the ESC to Receiver and Servo(s), we also add a ferrite suppression ring to the receiver connector wire set. In the majority of user configurations the ferrite ring will be unnecessary, so you may choose to remove it, then range check your system before flight-only adding it back if your particular setup shows increased range with ring in use.

Warranty and Service

Chargery Power Co., Ltd. as manufacture of R/C model power warrants its BEC. To be free of defects in material and workmanship, this warranty is effective for 6 months from date of purchase. If within the warranty period the customer is not satisfied with the products performance resulting from a manufacturing defect, the accessory will be replaced or repaired.

Damage due to physical shock (dropping on the floor, etc.), inappropriate power supply (lower input voltage or over input voltage, no forced air ventilation etc.), water, moisture, and humidity are specifically NOT covered by warranty.

In event of non-warranty damage, exchangeable for new at 50% discount from retail price.



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