

Hercules Super BEC PRO Mini

powered by **WRL** ITEM# WRL-HBECSPM

Congratulations on your purchase of the Hercules Super Battery Eliminator Circuit PRO Mini. This new Battery Eliminator Circuit is capable of handling extreme high voltages and is made with high quality components that can withstand outstanding high current loads of 16 Amps continuous / 22 Amps peak. The Hercules Super Battery Eliminator Circuit PRO is a glitch free high efficiency, high power switching voltage regulator designed to work with all popular brands of 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 Hercules Super 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 18s LiPo battery (75.6V). The Hercules Super BEC PRO Mini has high current rated silicone output wires with a Deans type connector. This will eliminate any unnecessary voltage drops that can occur with standard servo output cables. Technically it is not possible to deliver more than 10 amps through one or two servo type connectors, therefore a single pair of high power silicone wires and connector provides flexibility for user custom wiring that can provide real current delivery.

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

Features:

- Super high efficiency 5.2V, 6V, 7.4V and 8.2V selectable voltage regulator.
- Wide input voltage range from 9V to 75.6V (3-18 LiPo Cells). Minimum 12V input for 7.4V/8.2V applications.
- High current capability of 16 Amps continuous, 22 Amp peak with proper ventilation.
- High power output that handles multiple servos with proper power rated cables/wires.
- Built-in battery reverse polarity, current overload protection.
- High quality patented power inductor technology

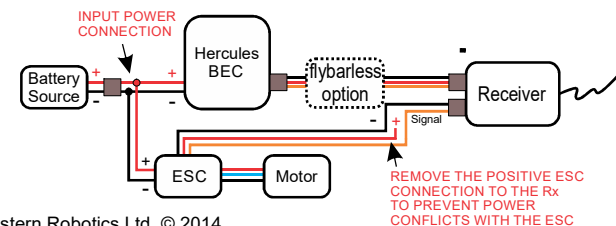
Package Contents:

- Hercules Super BEC PRO Mini unit
- User Instruction Manual

Installation

1. **WARNING! DO NOT OPERATE THE HERCULES WITHOUT DIRECTED FORCED AIR VENTILATION.**

Power Connections: **Please disconnect the battery from its terminal before soldering the power connections.** Connect the Hercules open input power wire connections by soldering the Red power wire to the positive (+) terminal of your battery source. Solder the Hercules Black power wire to the negative (-) terminal of the battery source.



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Installation Cont'd:

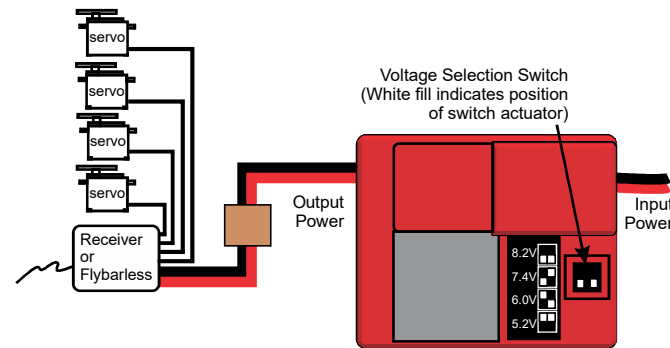
2. Having the BEC's output power cable connected to a Deans type connector provides you the option of using your own custom connection. You can solder your own wires to the provided connector or use your own if desired. It is recommended to keep the output wires to have minimum interconnects to prevent voltage drops within the connectors.
3. Make sure the polarity on the Hercules output wires are matching with the receiver / flybarless or to be powered device power polarity before inserting the Hercules plug - **black wire negative (-) and red wire positive (+)**. Connect the **ESC** signal connection to your receiver with the **positive red wire removed**.

WARNING! Under heavy continuous current load, the Hercules unit will get extremely hot and cause burns when touched. Allow unit to cool before handling.

CAUTION! Long duration of current loads of 10A or more continuous **MUST BE** used cautiously with forced cooled air ventilation directed at the Hercules. Ideally place the Hercules unit close to the aircrafts propeller for ventilation.

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

TYPICAL APPLICATION



Setup:

1. With the Hercules 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 Hercules to output 5.3V, 6V, 7.4V or 8.2V, set the switch settings on the Hercules 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.
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 source with a minimum of either 3 LiPo or 8 NiCd/NiMH cells, 4 LiPo cells for 8.2V operation.
4. The LED on the Hercules unit should turn on.

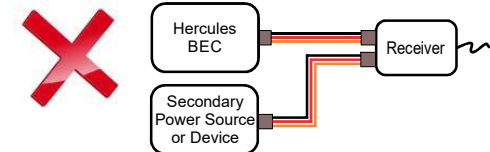
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Setup Cont'd:

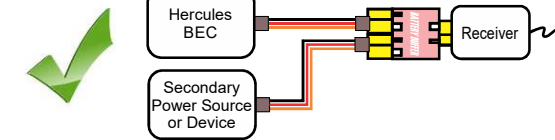
5. Now the Hercules is actively powering the RC receiver and servo(s). To further isolate noise from the ESC to Receiver and Servo(s), consider purchasing Western Robotics Glitch Buster that optically isolates them.

It is recommended to perform a range check with your radio systems to prevent possible interferences between electronic devices.

DO NOT CONNECT ANY POWER SOURCE IN PARALLEL DIRECTLY WITH THE ANY BATTERY ELIMINATOR CIRCUIT. THIS CAN CAUSE PERMANENT DAMAGE!



ONLY CONNECT AN ALTERNATE POWER SOURCE IN PARALLEL TO THE BATTERY ELIMINATOR CIRCUIT WITH AN BATTERY BUFFER PROTECTION CIRCUIT (SOLD SEPARATELY) IN BETWEEN



TROUBLESHOOTING:

- Q:** There is a visual spark when I connect the battery to the Hercules unit?
A: This is normal when large voltage sources are connected because the increase in potential that causes arcing during the initial connection. Consider using an electronic switch to avoid such spark.
- Q:** The Hercules LED does not turn on when power is applied?
A: Check if the power source is at least within the operation input voltages and the connections are secured tightly with the correct polarity. Make sure there are no shorts on the output side.
- Q:** The wire leads are getting warm?
A: This is normal when operating with higher currents. Make sure not to operate the unit beyond the specified voltage ratings.
- Q:** When I install the Hercules into my radio system and perform a range check, it reduces the range between my transmitter and receiver?
A: The Hercules have been tested with various radio systems and been found to be interference free to most receivers. However, due to the unlimited supply of new different radio systems in the market, an odd model of radio system might be more sensitive to electronic devices. If this is the case, try mounting and/or EMI shielding the Hercules away from the radio's receiver or using an alternative radio systems at a different frequency.

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Limited Warranty (North America Only)

The Hercules Super Battery Eliminator Circuit PRO Mini is guaranteed to be free from defects in material and workmanship for a period of 90 days from the date of purchase accompanied by the proof of purchase or invoice. Warranty does not cover damage due to improper use or incorrect installation.

During the 90 day warranty period, if the product shows defects caused by abuse, accident or misuse, it will be repaired or replaced upon Western Robotics Ltd. sole discretion, at a service charge not greater than 40% of the current retail list price. Please ensure to include your contact information before any repair(s) or replacement(s) can be conducted. Under no circumstances or condition will the purchaser be entitled to consequential or incidental damages. In no case shall our liability exceed the product's original cost. We reserve the right to modify warranty provision without notice. Because Western Robotics Ltd. has no control over connection and use of this product, no liability may be assumed nor will be accepted for damage resulting from the use of this product, user accepts all resulting liability. If you attempt to disassemble, modify or repair this unit yourself, it may void the warranty.

For warranty service on Western Robotics product(s) in, out or off warranty period, please send the defective unit(s) along with the proof of purchase and a description of the problem, postage paid, to the given address below.

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