

Hercules Super BEC PRO

powered by **WR** ITEM# WRL-HBECSP

Congratulations on your purchase of the Hercules Super Battery Eliminator Circuit PRO. 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 has a built in power bus system that allows multiple servos to be plugged directly into the Hercules unit. This will eliminate any unnecessary voltage drops that can occur with standard receiver connections that share one power connection with multiple servos that require high current demands. Technically it is not possible to deliver more than 10 amps through one or two servo type connectors, therefore the bus system is a must have for 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 built in power bus system that allows for direct servo connections
- Built-in battery reverse polarity, current overload protection.
- High quality patented power inductor technology
- Built-in digital power on/off enable port (External switch sold separately)

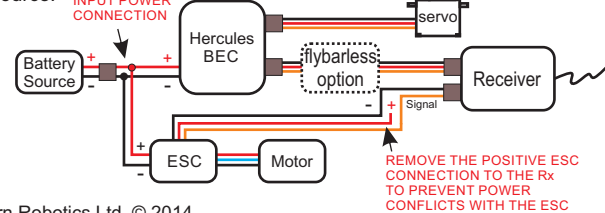
Package Contents:

- Hercules Super BEC PRO unit
- Servo male to male jumper cables x 4
- 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.



Installation Cont'd:

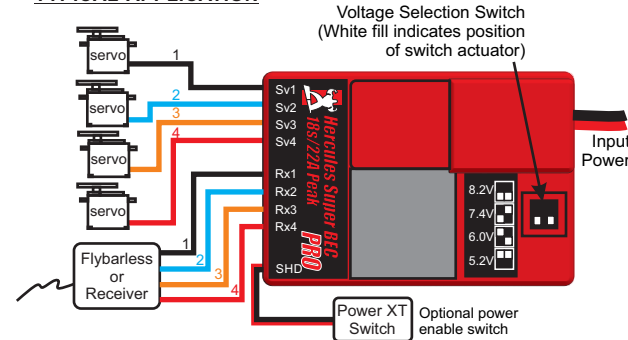
2. Connect the required servos directly into the servo channels on the Hercules BUS connection labelled Sv1 to Sv4.
3. With the included servo male to male jumper cables connect the Hercules Rx1 to Rx4 channels with the receiver channels to match the servo attachments. The signals on the Hercules power bus is bypassed on the same channel labelled on the Hercules. For example, Rx1 signal is tied to Sv1 channel and vice versa. Please refer to the typical connection diagram below for high current application to minimize voltage drops. Make sure the polarity on the Hercules Rx1-4 channels are matching with the receiver slot before inserting the Hercules plug - **black wire negative (-) and red wire positive (+)**. The black negative wire on the top side of the BEC unit nearest to the labels. Connect the ESC signal connection to your receiver with the **positive red wire removed**.
4. **Shutdown switch connection (optional):** If a remote switch is desired to turn off the Hercules BEC outputs, a optional toggle switch (sold separately as Power Switch XT) can be connected to the SHD two pin slot. The two pin switch can be inserted on the SHD pin either way, once the SHD slot has the two pins shorted, the Hercules outputs will be disabled.

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

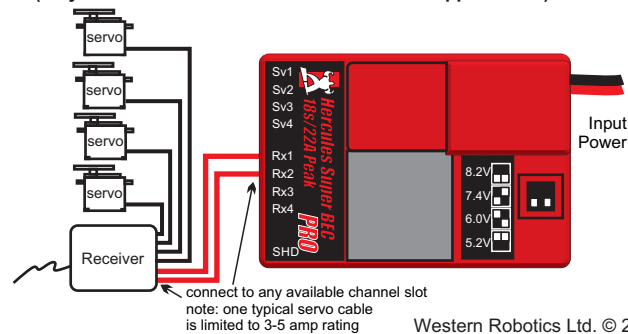
CAUTION! Long duration of current loads of 10A or more continuous MUST BE used cautiously with forced cooled air ventilation directed at the Hercules. Ideally place the Hercules unit close to the aircrafts propeller for ventilation.

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

TYPICAL APPLICATION

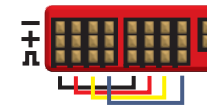


LOW CURRENT APPLICATION with less wiring (only recommended for lower current demand applications)



PORT

NOTE: ALL + POSITIVE AND - NEGATIVE ARE TIED TOGETHER. SIGNAL LINES ARE CONNECTED AS SHOWN RESPECTIVELY

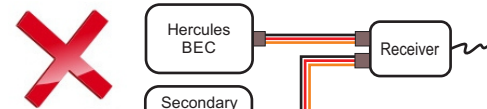


Setup:

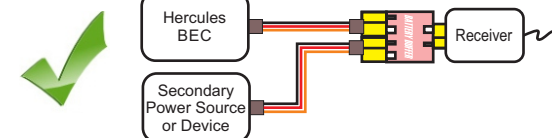
1. With the Hercules unit installed and required servo(s) connected, turn on the transmitter with a minimum throttle level without the battery connected.
2. Before connecting the battery to the circuit, please ensure that the proper output voltage settings are set for your particular application. To 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.
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:** What if I need to connect more than 4 servos?
A: You can use the available slots available on your receiver and the servo can connect directly to the receiver as well. The power is passed on to the receiver through the Rx1-4 connections. However, it is recommended to connect the heavier demanding servo's directly to the Hercules BEC rather than then to the receiver, this will prevent unnecessary voltage drops caused within the extra cables and connectors.



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Limited Warranty (North America Only)

The Hercules Super Battery Eliminator Circuit PRO 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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