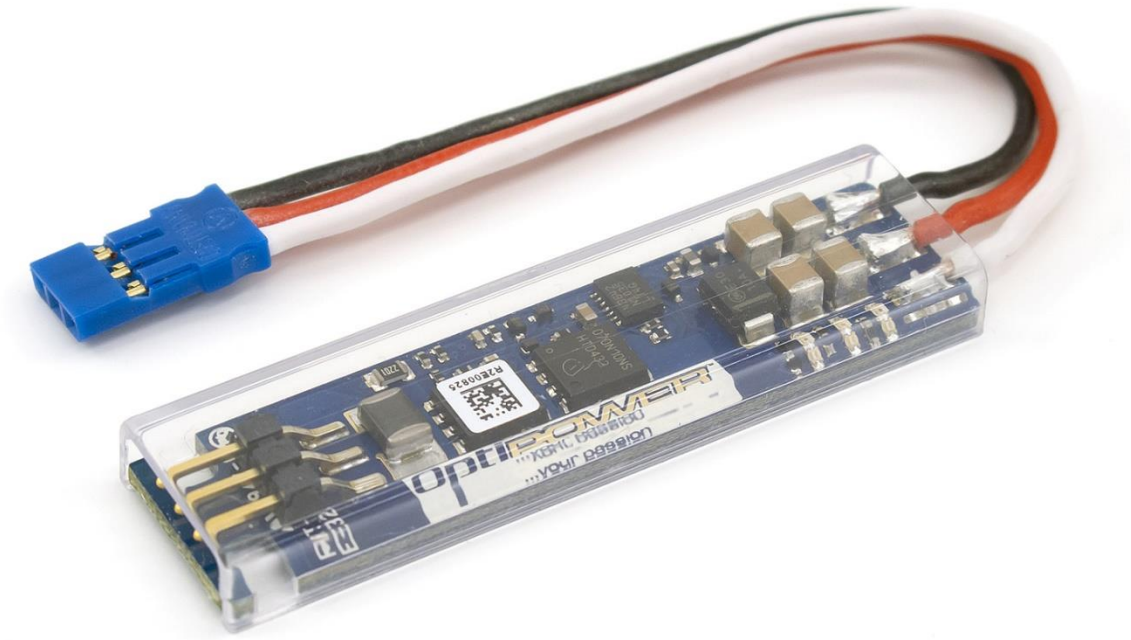
OPTIPOWER BEC GUARD MANUAL

OPRBG001 R5

2/25/2015
ANDREW Hinton-Lever
Rev 005



General Specification:

Basic Functions and Advantages

a) The BEC Guard eliminates back “EMF” to the ESC/BEC
b) The BEC Guard eliminates forward voltage spikes greater than 10V inwards or outwards
c) The BEC Guard smooth's the BEC voltage output and eliminates voltage fluctuations and therefore helps with reducing “brown outs” due to momentarily low BEC voltages
d) The BEC Guard eliminates all over voltages up to 100V (from 10V) thereafter shuts down (soft shut down) protecting the FBL/RX and servos from over voltage.
e) For total protection use in conjunction with ULTRA Guard Super Combo
f) Connector output is universal JR Plug using 19AWG copper silicon wire 5 Amp continuous (12-18 amp burst). Device 40A max.
g) Connector input is standard 3-pin and signal cable is straight through

1. Size

a. The BEC Guard weights 8g including cover
b. Length is 56.36mm Width is 15.29mm and Thickness is 6.00mm

2. Installation

a. Single Supply Options



Fig 1: Single ESC with built in BEC

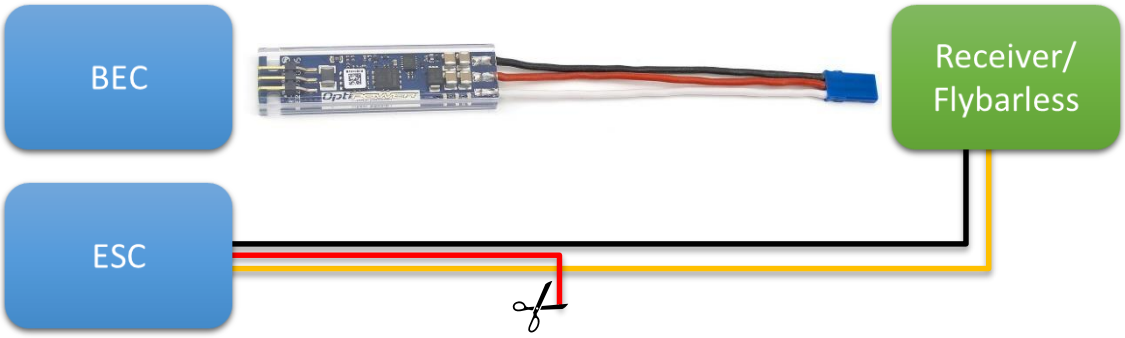


Fig 2: ESC with external BEC, cut and isolate red wire from ESC. Check instructions on your ESC.

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b. Dual BEC Supply Options

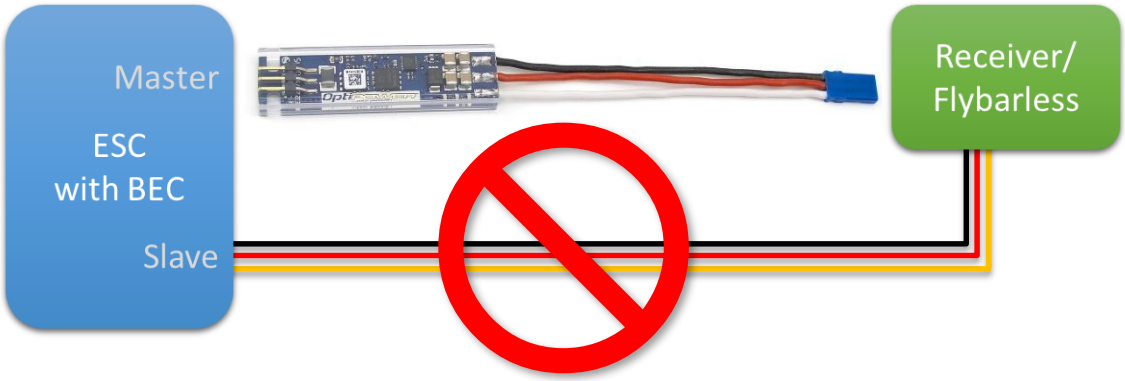


Fig 3: Never *"bypass"* the BEC Guard by connecting additional or slave cables directly to the receiver for correct installation see Fig 4 and Fig 5.

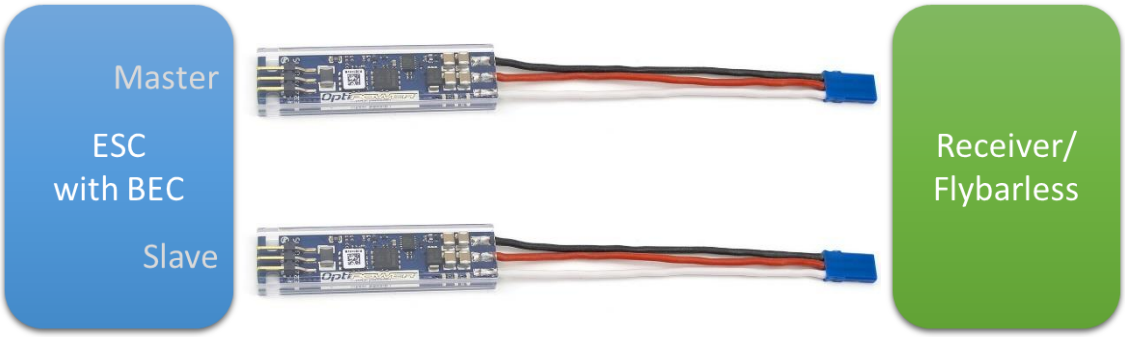


Fig 4: If dual supply is required, use a second BEC Guard for the slave connection this will give the best possible protection and performance.

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c. Dual BEC Supply "Y" Lead Option

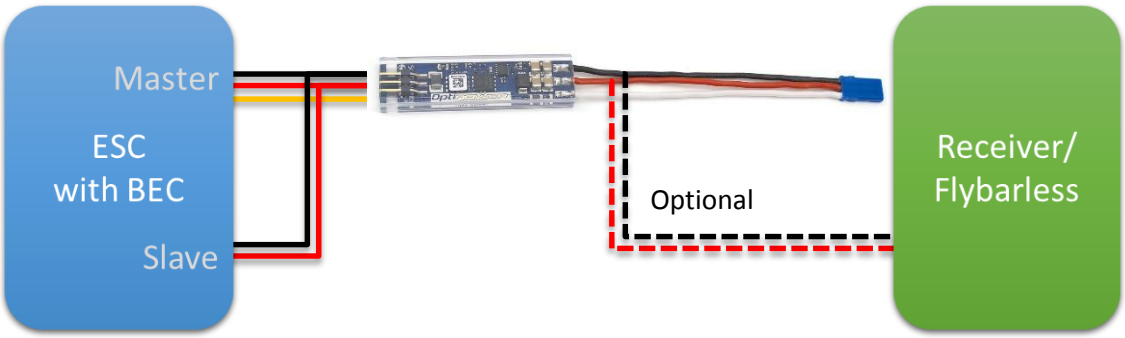


Fig 5: Use of a Y-cable to connect Master and Slave cables together or soldering the cables together also is a valid solution. The protection is 100% valid and the performance is sufficient for almost all applications.

d. Connection option with ESC and external dual supply BEC

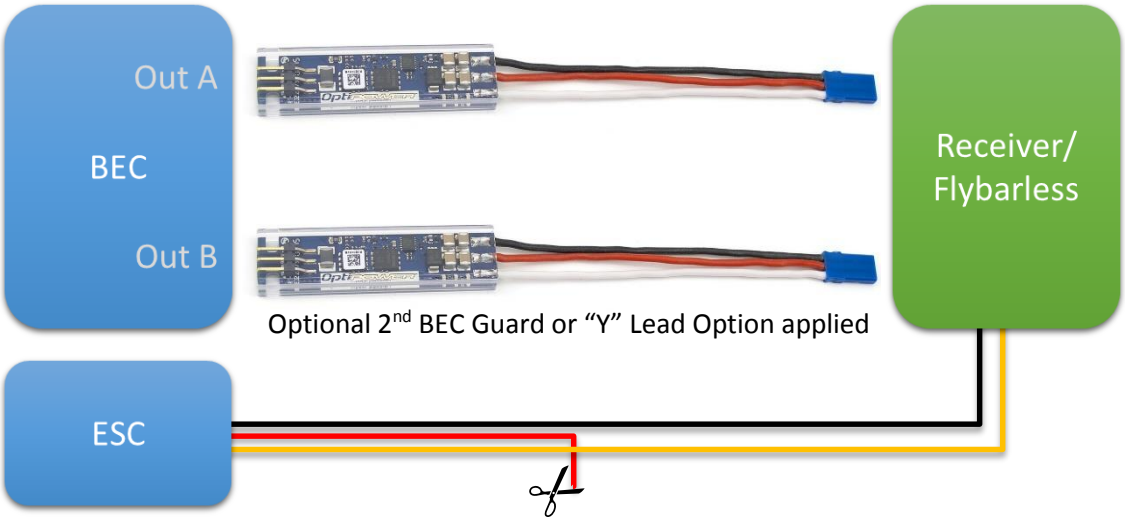


Fig 6: ESC with external BEC and dual supply, cut and isolate red wire from ESC. Check instructions on your ESC.

REMEMBER always use an ULTRA Guard to give you model complete protection.

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3: LED's on BEC Guard- What they indicate

LEDs Status:

- Green = input powered (no quality indication)
- Blue = output enabled, voltage within thresholds = normal operation OK
- Red = over voltage input (on during the over voltage regulation phase, the device will switch off completely shortly if over voltage condition is permanent)
- If connected to an UG on the output, red will stay on, even if device has shut down

For complete protection always use in conjunction with an ULTRA Guard 430.

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