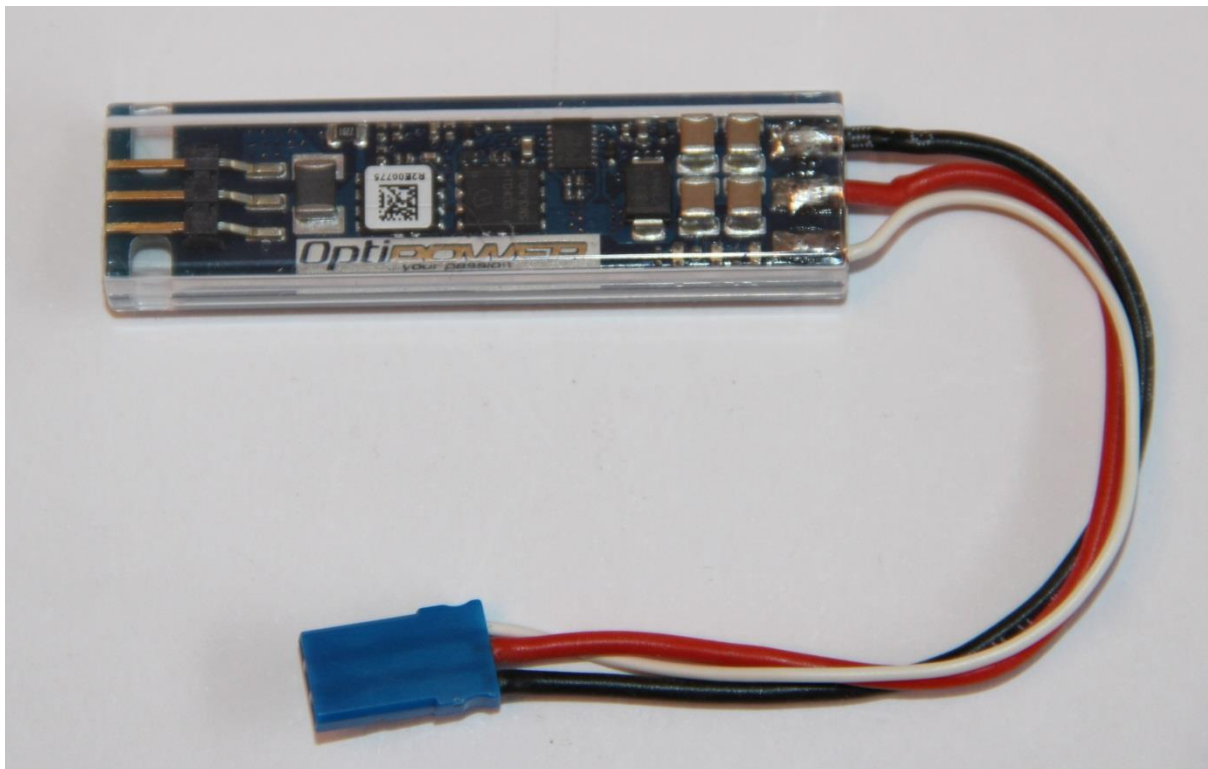


OPTIPOWER BEC GUARD MANUAL

OPRBG001 R4

2/10/2015
ANDREW Hinton-Lever
Rev 004



General Specification:

Basic Functions and Advantages

- The BEC Guard eliminates back “EMF” to the ESC/BEC.
- The BEC Guard eliminates forward voltage spikes greater than 10V inwards or outwards.
- 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.
- 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.
- For total protection use in conjunction with ULTRA Guard Super Combo.
- Connector is universal JR Plug using 19AWG copper silicon wire 5 Amp continuous (12-18 amp burst). Device 40A max.
- Connector is standard 3-pin and signal cable is straight through.

1. Size

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

2. Installation

a. Single BEC Supply Option – Fig 1 and 2

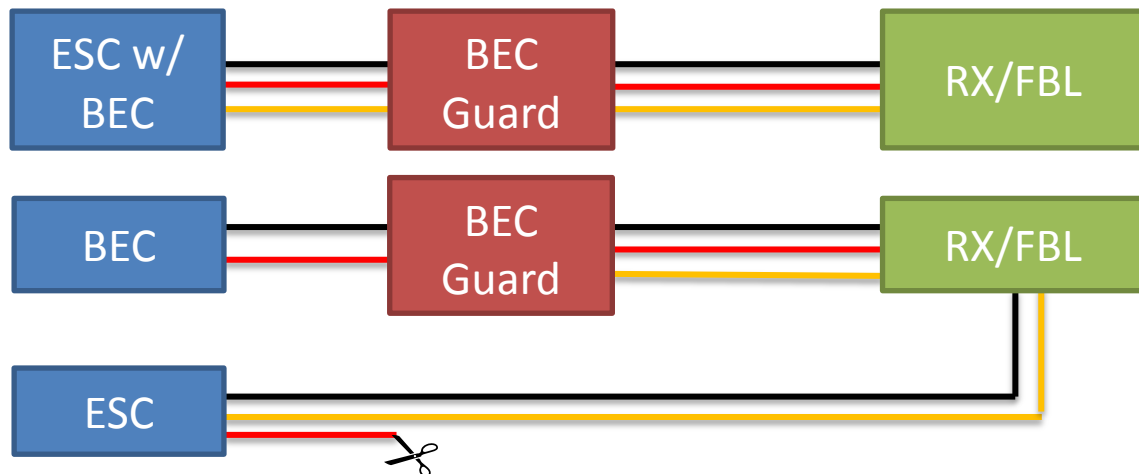


Fig 2: If connecting ESC with integrated BEC remember to cut the red wire as instructed in your ESC manual!

b. Dual BEC Supply Option – Fig 3

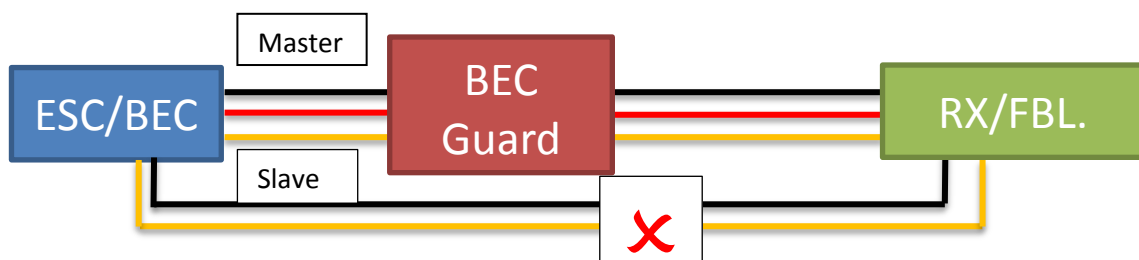


Fig 3: Never “bypass” the BEC Guard by connecting additional or slave cables directly to the receiver flybarless controller see Fig 4 option.

Fig 4:

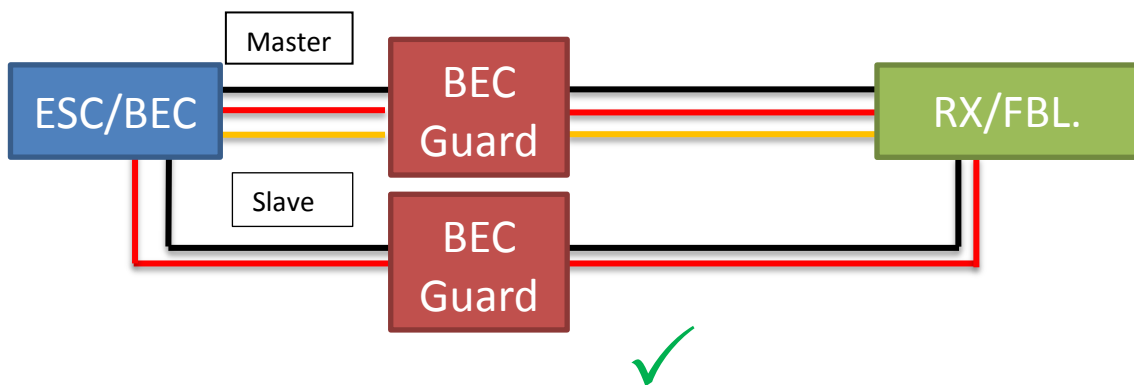


Fig 4: If dual supply is required, use a second BEC Guard for the slave connection this will give the best possible protection and performance.

c. Dual BEC Supply “Y” Lead Option.

Fig 5:

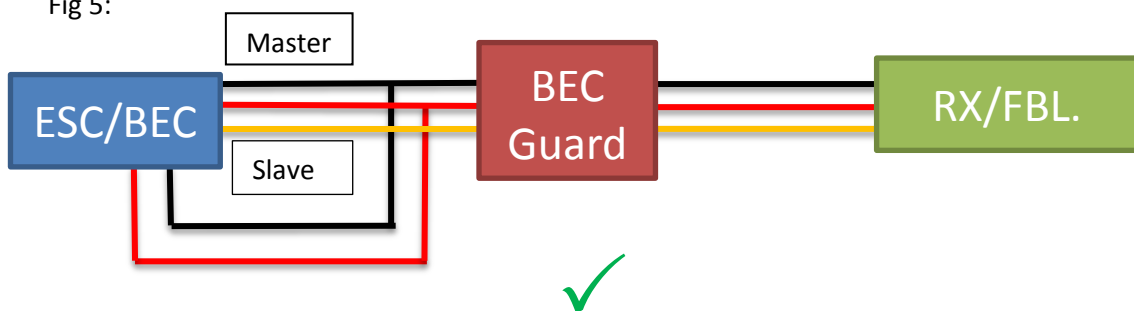


Fig 5: Use of a Y-cable to connect Master and Slave cables together or soldering the cables together also is a valid solution. The protection is 100% valid and the performance is sufficient for almost all applications.

d. Connection option with dual supply ESC and external BEC.

Fig 6:

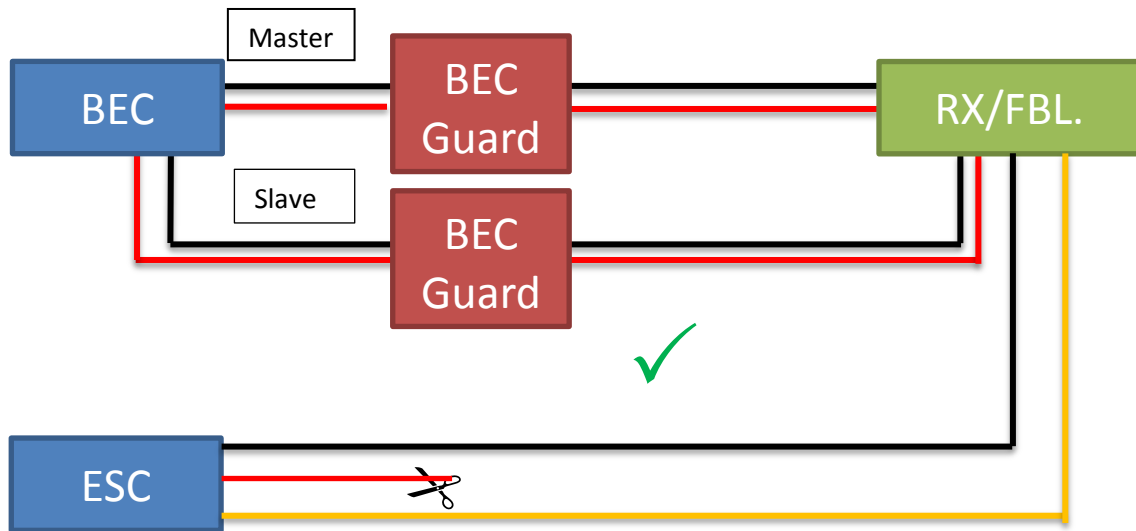


Fig 6: If connecting ESC with integrated BEC, remember to cut red wire as instructed in your ESC manual!

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

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.