

BECSafe

† Optional reserve battery not included

- ☺ Protects RC system from over-voltage should BEC fail short-circuit - switches RC gear to your reserve battery to maintain control.†
- ☺ Maintains RC supply by switching to your reserve battery should BEC voltage drop too low or fail completely.†
- ☺ Automatically checks BEC output before passing it to the RC system.
- ☺ Automatically sets over-voltage and under-voltage trip points to suit BEC output.
- ☺ BEC OK and BEC failure indicator LEDs

BECSafe can be very expensive. When faulty, BECS may put close to the full battery voltage onto the RC system burning out your receiver, servos and gyro - and leaving you with no control over the model! BECSafe protects against this as well as under-voltage and total power loss failures in BEC powered systems.

Improving safety for electric powered models:

BECSafe



Ratings

Weight: 11g
 Dimensions : 35mm x 24mm x 10mm
 BEC voltage range: 5 - 6 v
 Backup battery 4 cell NiMH

**Manufactured in the UK by
 CSM Design Consultancy Ltd**

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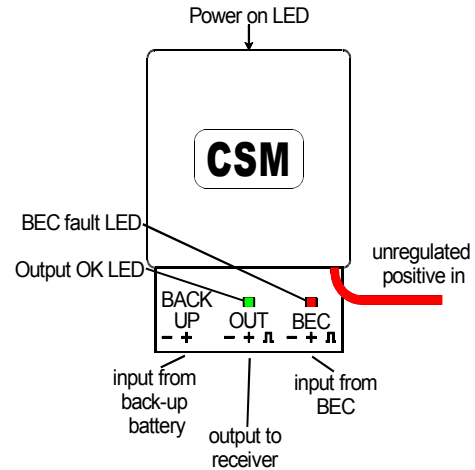
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The primary purpose of BECSafe is to prevent excessive voltage reaching your RC system should the regulator of the BEC fail. The unit switches the receiver supply over to the backup supply if the regulator voltage exceeds 1v above the BEC output at the time of turn on. BECSafe is designed to work with 5v to 6v BECs. For those wishing to operate outside these limits please contact CSM.

BECSafe also switches the RC system over to the reserve supply should the BEC output fall dangerously low (below 4.1v).



Normal operation

On turn on the yellow power LED lights. The red BEC fault LED also lights while the output of the BEC stabilises and is checked to be within acceptable limits (4.8v to 6.1v)

If the BEC output is within bounds the red LED will turn off and the green "Output OK" LED will light and the BEC power will be switched through to the BECSafe output.

BECSafe continues to monitor the BEC output during the flight and will switch to the backup supply if the BEC output goes outside acceptable limits.

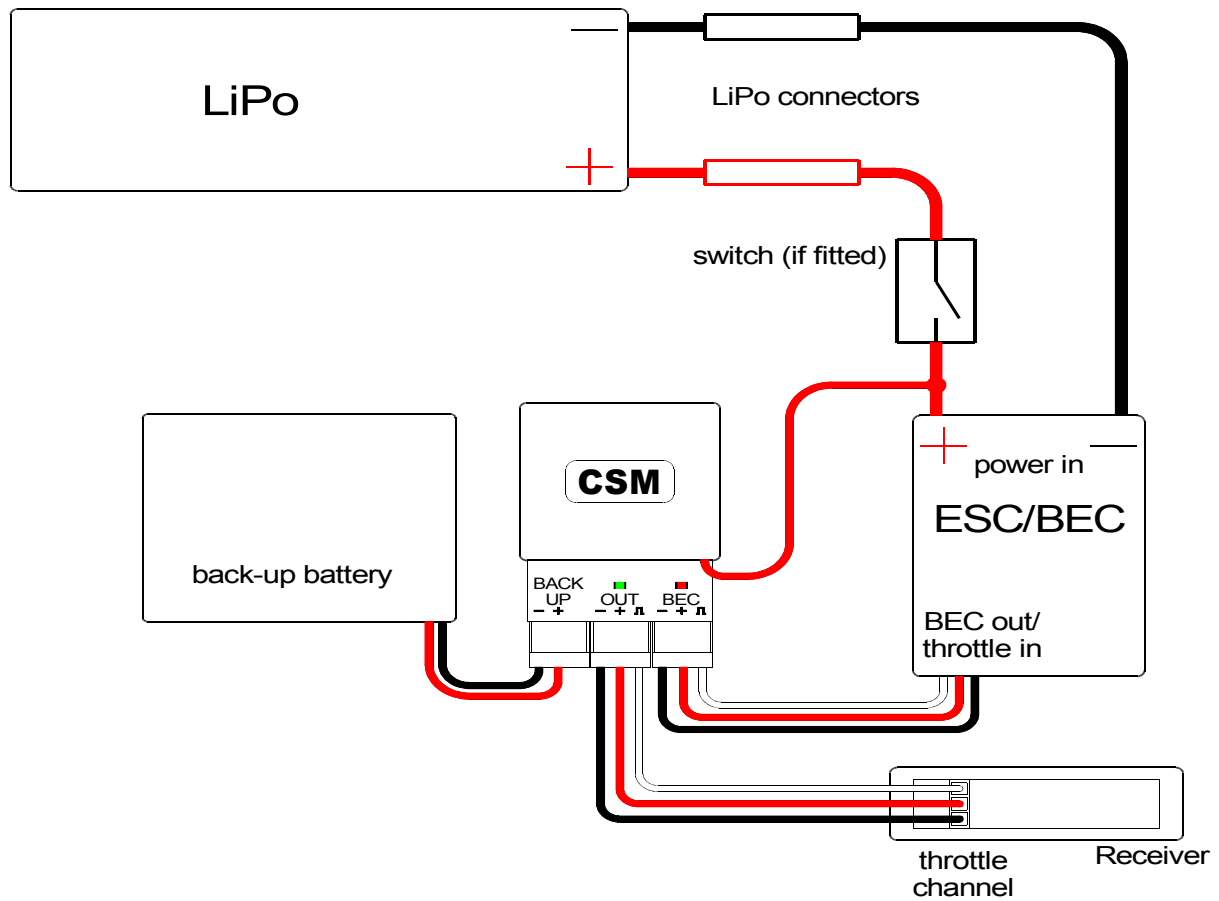
Choice of backup battery

We recommend that you connect a 4 cell NiMH backup battery to BECSafe and that you ensure that this has sufficient capacity to last one complete flight in case the BEC fails early in the flight. Because the backup battery is not drained at all during normal operation low discharge type NiMH cells are worth considering.

Charging the backup battery

BECSafe does not charge the backup battery during flight. However, no current is drawn from the backup during normal operation so charging is only normally needed to make good any self-discharge of the backup. We suggest that you check the state of charge of the backup before each day's flying and charge as required.

Connecting BECSafe to your RC system



Note: make sure that the unregulated power input to BECSafe is connected on the BEC side of any power isolation switch if one is fitted. If no switch is fitted then a convenient place to connect the unregulated power input wire is to the BEC side of the positive battery connector.

BECSafe handles and indicates the following conditions:-

CONDITION	INDICATION	BECSafe OUTPUT
BEC voltage OK	GREEN LED on solidly	from BEC
BEC voltage too low at turn on.	RED LED on solidly GREEN LED off	no output
BEC voltage too high at turn on	RED LED flickers GREEN LED off	no output
BEC voltage becomes too high after turn on	RED and GREEN LEDs flicker	from backup battery
BEC voltage falls too low after turn on	RED and GREEN LEDs slow flash	from backup battery