8 Amps Switch-Mode UBEC

1. Why do you need UBEC?

The 8A-UBEC is a switch-mode DC-DC regulator supplied with a 2-3 cells lithium battery pack and outputs a consistent safe voltage for your receiver, gyro and servos. It is very suitable for RC helicopter (above 30 class) and big fixed-wing aircraft.

Compared with the linear mode UBEC, the overall efficiency of the switch-mode BEC is much higher, so it can extend the working time of the receiver battery pack, and because a switch mode UBEC can significantly reduce the heat emission, it can avoid the loss of control caused by the over-heat problem which is frequently happened with the linear mode UBEC.

2. Specification:

2.1. **Output:** 5V/8A or 6V/8A (Changeable)

2.2. **Input:** 6V-12.6V (2-3 cells lithium battery pack)

2.3. **Size:** 42mm*39mm*9mm (length*width*height)

2.4. **Weight:** 34g

2.5. **Quiescent current:** 60mA

3. Features:

3.1. Designed with an advanced switch mode DC-DC regulator IC, the max efficiency of the chip is up to 95%.

3.2. The output current is very large, the continuous output current is up to 8A, and the burst output current is 15A.

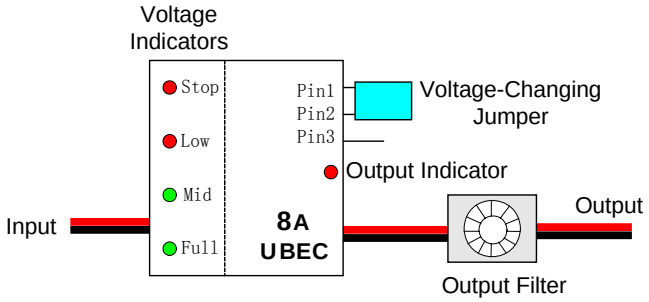
3.3. With the output short-circuit protection function and the over-heat protection function.

3.4. A metal shield covers almost all the electronic components, and a specially made filter is attached with the output wires to significantly reduce the electromagnetic interference.

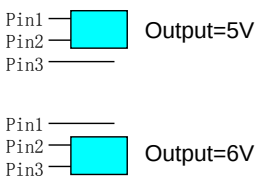
3.5. Automatically detects the number of the lithium battery pack (2 cells or 3 cells), and shows the battery capacity with 4 indicators (LEDs).

3.6. Shows the working status with an indicator (LED), lights when the output is in normal range.

4. Wiring Method



Change The Output Voltage



5. Special Explanation

5.1. Although we have tried our best to reduce the electromagnetic interference caused by switch model UBEC, it still may cause some interference to the receiver. So please install the filter far away from the UBEC's main board, and DON'T stack the filter on the main board. Please put the whole UBEC far away from the receiver as possible.

5.2. This UBEC is only designed for using lithium batter pack; we don't recommend the use of NiMh / NiCd battery pack.

6. How to Use the UBEC?

6.1. Change the output voltage

The voltage is chosen by a jumper. If the jumper is insert into pin1 and pin2, the output power is 5v; If the jumper is inserts into pin2 and pin3, the output power will be 6V. Please refer to the wiring diagram on the left side. If the jumper is lost, the output voltage is also 6V.

6.2. Working status indicator (LED)

The LED is used to show whether the output is normal or not. It lights when the UBEC has the normal output. If it doesn't light, please check the battery connections.

6.3. Power capacity indicators (4 LEDs)

LED Status				The voltage of the lithium battery pack	
Full	**Mid**	**Low**	**Stop**	**2S battery pack**	**3S battery pack**
○	○	○	○	7.8－8.4V	11.7－12.6V
●	○	○	○	7.2－7.8V	10.8－11.7V
●	●	○	○	6.6－7.2V	9.9－10.8V
●	●	●	○	5.4－6.6V	<9.9V
4 LEDs flash at the same time				1)The voltage <5.4V 2)The voltage >13.5V	1)The voltage >13.5V
One LED flashes for a short time				The voltage of the battery pack is just at the critical edge of each range.	

○ means the LED lights, ● means the LED does not light

When you are using a 3 cells lithium battery pack, if there is only one LED ("STOP") lights, that means the voltage is less than 9.9v, please change the battery pack as soon as possible, otherwise it will be damaged because of over-discharging. At the mean time, the UBEC may mistakenly calculate the number of the battery cells, the battery pack will be considered as 2 cells, so the power capacity indication function will also be confused.