

**UBEC**  
**10A / MAX 20A**  
 INPUT 6-25.2V / 2-6S Lipo



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## 01 Introduction

The UBEC is an external switching mode DC-DC regulator; it draws the DC voltage from 2-6S Lipo battery, drops it to a voltage level that is suitable for receivers and other electronic devices, and keep providing the stable current output of up to 10Amp. As the UBEC has such a powerful output capability, so it is particularly applicable for large helicopters and fixed-wing aircrafts.

## 02 Features

- It adopted the advanced DC-DC regulator chip with conversion efficiency exceeds 90%.
- 4 options for the output voltage, applicable for all kinds of receivers/gyros/servos, etc.
- It owns BEC shoot-through protection, which prevent the input voltage from directly flowing to the output end and causing damages to receivers, servos and other electronic devices.
- It featured other protections like over-current protection, short-circuit protection (at the output end) and thermal protection make the use more safe and reliable.
- 2 cables are connected in parallel at the output end of the UBEC, allow larger current to flow into the receiver.
- It has one status LED, which lights up when the UBEC works normally.
- The external switch can turn on/off the UBEC easily.
- Exquisite aluminum case is helpful for heat dissipation & EMI (Electromagnetic Interference) reduction.

### Specifications

Model	UBEC-10A
Input Voltage	6V-25.2V (2-6S LiPo)
Output Voltage	5.0V/6.0V/7.4V/8.4V
Output Amperage	Continuous Current: 10A, Peak Current: 20A
Dimension	43.1x32.3x12.5mm
Weight	36g

## 03 Change the Output Voltage

### Change the Output Voltage

There are 3 dip switches on the UBEC. User can change the output voltage in the following way.

**Set to 5.0V:** Dip switch #1 = Off, #2 = Off, #3 = Off.

**Set to 6.0V:** Dip switch #1 = Off, #2 = Off, #3 = On.

**Set to 7.4V:** Dip switch #1 = Off, #2 = On, #3 = On or Off (irrelevant).

**Set to 8.4V:** Dip switch #1 = On, #2 = On or Off (irrelevant), #3 = On or Off (irrelevant).

**Note:**

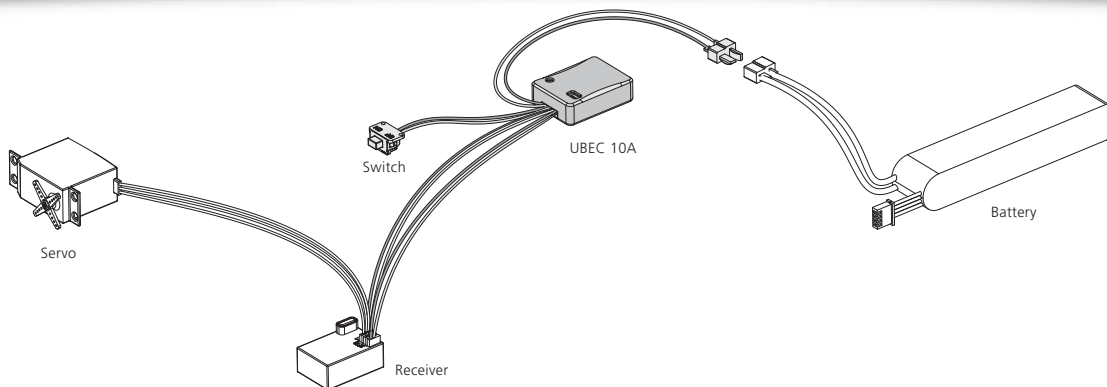
Face to the front panel of the UBEC, from left to right, the dip switches are #1, #2, #3.

8.4V	ON	X	X
7.4V	OFF	ON	X
6.0V	OFF	OFF	ON
5.0V	OFF	OFF	OFF



**Note:**  
 "X" indicates either the dip switch is on the position of ON or OFF is OK.

## 04 Wiring



### 1. When the ESC has no built-in BEC,

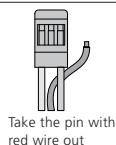
there's no need to make any change to the brushless ESC, user only needs to connect the input end of the UBEC to the battery wires in parallel and plugs the output end (of the UBEC) into any unoccupied channel on the receiver.

### 2. When the ESC has a built-in BEC,

user needs to disconnect the built-in BEC output on the brushless ESC; that means disconnecting the red wire in the ESC control cable (please see the picture below), then connect the input end of the UBEC to the battery wires in parallel, and plug the output end (of the UBEC) into any unoccupied channel on the receiver.

#### Tips:

You can use a sharp screwdriver to take the pin (with red wire) out from the control cable plug (JR male connector) of the ESC, and then insulate it with a bit of electrical tape for further use. By this method, you needn't cut the red wire in the control cable.



#### Note:

1. As the switching mode DC-DC regulator may produces some electromagnetic interference in operation and affects some poor-quality receivers (especially the outdated AM/FM receivers), so for ensuring the normal operation of those receivers, please keep the UBEC at least 5cm away from receivers when it's installed.
2. Polarity of the power supply must be aligned with the polarity of the UBEC at the input end, incorrect polarity is not permitted. So please ensure the correct connection before use; otherwise, the UBEC will be seriously damaged.

## 05 Explanation for the Status LED

Red LED lights up when the UBEC is connected to the battery indicating the UBEC outputs voltage normally. If the LED doesn't come on indicating the UBEC doesn't output any voltage; in that case, please check if all the input wires are well connected and there's nothing wrong with the battery pack.