Calculating The Regulator's Current Capability

The actual current the regulator can handle is based on both the input voltage and the output voltage. The regulator's 5A current handling is based on an input voltage of 8.4 volts and an output voltage of 6.0 volts. If you have some other combination of input and output voltages you can calculate how much continuous current the regulator can handle. The maximum amount of current the regulator can supply is about 8 amps even if you calculate you can handle more continuous current based on your input and output voltages. You can use the following formula where Vin is the input voltage and Vout is the output voltage and Ic is the continuous current capability:

Ic=12/(Vin-Vout)

An example might help clarify this. If you were using a 3-cell lithium pack in an electric, the fully charged voltage of the pack is about 12 volts. If you set the output voltage of the regulator at 6 volts then , using the equation:

Ic=12/(12.0-6.0) =12/6.0 =2 amps

Further Instructions Inside

Adjustable Voltage SportReg

By Smart-Fly

Features:

- **Built-in BatShare**
- **Standard R/C Connectors In & Out**
- **For use with 2-cell Lithium Packs**
- **Adjustable output voltage, ~5.1V-6.4V**
- **Can be used with Optional Failsafe Switch**
- **Low weight 0.9 oz**
- **Small size 2.25" x 2.0" x 0.5"**
- **850mV dropout @ 5A**

Product Code:
Reg05

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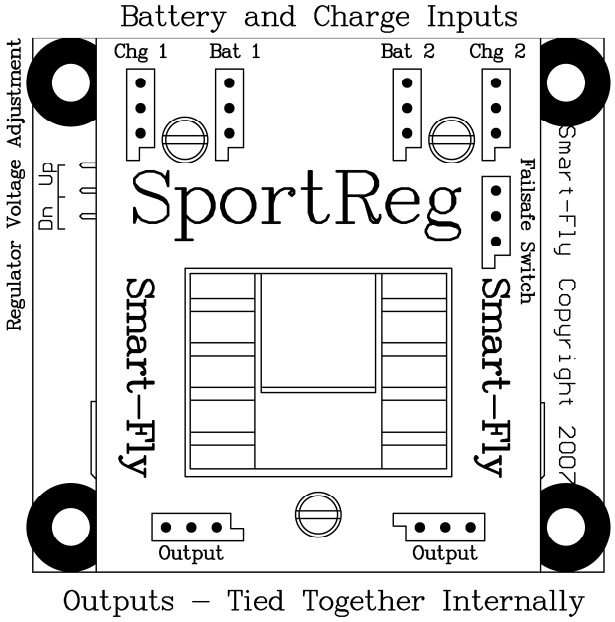

Instructions:

1) The SportReg is intended to be used with 2-cell Li-ion or Li-poly batteries (8.4V).
2) The two batteries are connected to "Bat 1" and "Bat 2". If the optional failsafe switch package is used then the failsafe switch plugs into the jack marked "Failsafe Switch" and the two charge leads plug into "Chg 1" and "Chg 2". The charge leads are mounted on the fuselage side using the two Ernst charge jacks provided in the failsafe switch package.
3) The two "Outputs" are connected to the receiver by the male-male jumpers provided. Using the "Futaba" end on the SportReg will insure the polarity is correct.

Notes:

1) The regulator will stay in regulation any time the battery voltage is 0.85 volts or above the set output voltage.
2) If the voltage output of the regulator is measured with no load (not connected to anything but the voltage meter) then the voltage will not be accurate. This is because a minimum load, about 25mA, is required and is supplied by the receiver to bring the unit into regulation. Always check the output voltage with the regulator supplying a load.

Adjusting The Regulator Output Voltage:

The regulator's output voltage is adjusted by momentarily (less than a second) shorting two of the adjustment pins together. This can be done with any metal object such as a screw driver. To increase the voltage, short the two pins designated "Up" together momentarily. To decrease the voltage short the pins designated "Down" together momentarily. If you hold the pins shorted for longer than one second the voltage will increase or decrease at a rate of about one quarter volt a second.