

**PowerBox Systems**

World Leaders in RC  
Power Supply Systems

# ***Voltage Regulator***

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*(linear)*

Operating Instructions



Linear Voltage Regulator

Dear customer,

The Voltage Regulator is a small, lightweight unit with a very high performance designed as a reliable method of preventing excessive voltages reaching the receiver and servos.

The regulator is ideal for use with Lithium-Polymer batteries (2-cell packs, 8.4 V) in your model; it also prevents excessive voltage when used with a 5-cell NC pack.

The unit's IC provides linear regulation of battery voltage at 5.9 Volts. This means that the power supply is always below 6.0 Volts, which is the maximum value stipulated by all radio control system manufacturers. Maintaining the approved voltage increases substantially the effective life of all components, but primarily of the servos. The constantly regulated voltage ensures that all servos always run at high speed with full power, whether they are operating under light or heavy loads.

The voltage regulator's low weight of just 8.5 grammes means that it can safely be employed in any small to medium-sized model aircraft without any significant increase in all-up weight. This means that the weight advantage inherent to Lithium-Polymer cells can still be exploited to the full.

The unit is equipped as standard with a Uni or JR or Futaba connector, as fitted to your battery. The connector is polarised.

The connecting lead attached to the voltage regulator can be plugged directly into the receiver socket.

If you wish to use a switch harness in the power supply circuit we recommend looping the switch in between the voltage regulator and the batteries.

Of course, the regulator can also be used to provide a regulated voltage to other devices. For example, it can be used in conjunction with Lithium-Polymer cells and our switch backer or any other non-regulated battery backer. The voltage regulator's capacity is 5 Amps, which is ample for use in any model equipped with 6 - 8 standard servos or 5 - 6 digital servos.

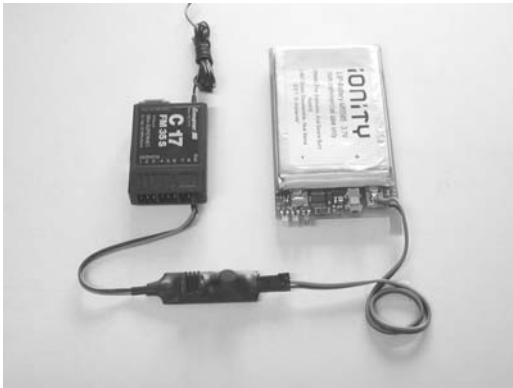
All voltage regulation systems generate waste heat which has to be dissipated (varying according to throughput), and for this reason the regulator should be located in an open position in the model, i.e. it should not be packed in foam or similar.

Specification:

Weight:	8.5 grammes
Voltage range:	4.0 - 9.0 Volts
Regulated voltage:	5.9 Volts
Max. load:	regulated: 5.0 Amps unregulated: max. 10 Amps
Regulator losses:	0.14 Volt

The unit is approved exclusively for use with a 2-cell Lithium-Polymer battery or a 5-cell NC pack.

The regulator must not be connected to a mains-powered PSU!



We hope you have many hours of pleasure using your voltage regulator.

Donauwoerth, April 2004

A handwritten signature in black ink, appearing to read "R. E." with a stylized flourish.

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