

VR1-5V

USER'S MANUAL

VR1-5V

Voltage Regulator / Battery Eliminator
With 5 Volt Output

Made in Canada by:

EA Electronics

8 Maple St., Ajax, Ontario

Canada L1S 1V6 (905) 619-1813

www.eaelec.com

Rev. 0

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Introduction

The VR1-5 is a low dropout voltage regulator / battery eliminator with a fixed 5 volt output. The VR1-5 can deliver up to 1 amp output. It is equipped with screw terminals for easy, no-soldering connection. .

VR1 Specifications

Input voltage range: 5.5 to 30 volts DC.

Output voltages available 5 volts (+ or - 5%):

Drop-out threshold: 5.5 volts.

Output current: Up to 1 amp, see table below.

Short-Circuit current limited to 1.6 amps

Reverse battery protection

One year limited warranty.

Size:

1.4" x 1.32" x 0.5"

35mm x 33 mm x 8 mm.

Operating Limitations

Input Voltage - if the input voltage drops below 5.5 volts, the regulator will not function properly, i.e. the output voltage will drop.

Output Current -Linear voltage regulators such as the VR1 have several advantages over switching type regulators, they are simple, inexpensive and generate very little RF noise. The disadvantage is, under certain conditions they can generate a lot of heat. The amount of heat depends on the current output and the difference between the input battery voltage and the output voltage ($V_{in} - V_{out}$). The table below shows the allowable current output for different battery voltages.

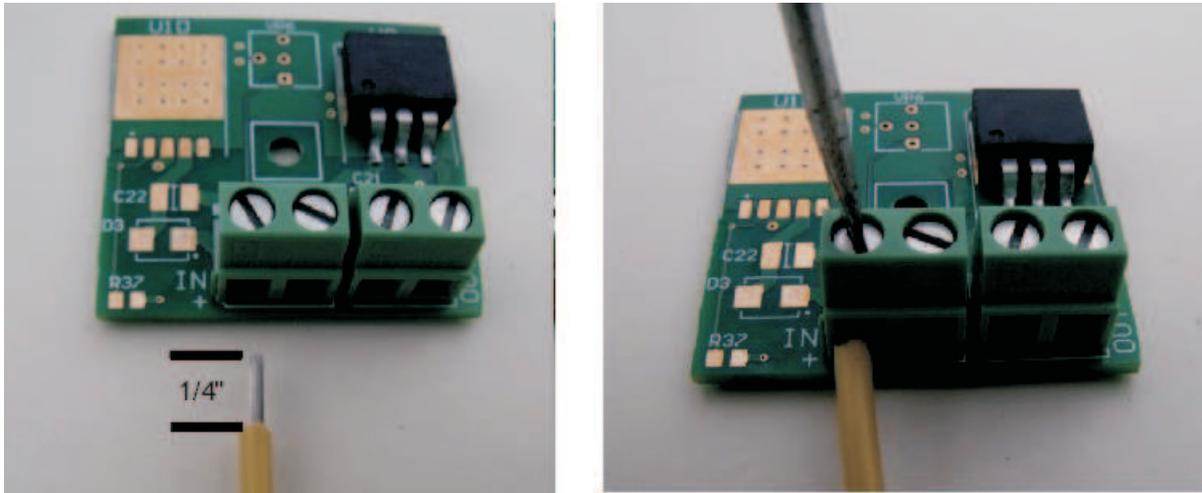
VR1-5V Derating Table

Input Voltage	Output Voltage	Max. output current
5.5 to 8 V	5 V	1 amp
8.1 to 10 V	5 V	1/2 amp
10.1 to 14 V	5 V	1/3 amp
14.1 to 18 V	5 V	1/4 amp
18.1 to 24 V	5 V	1/6 amp

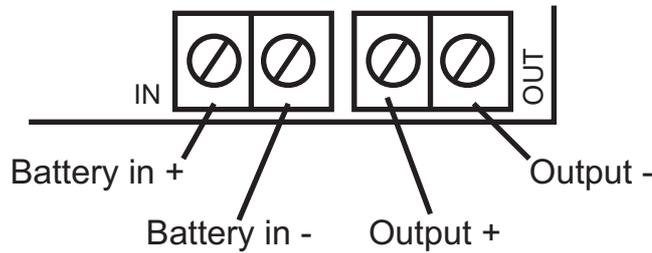
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Wiring The VR1

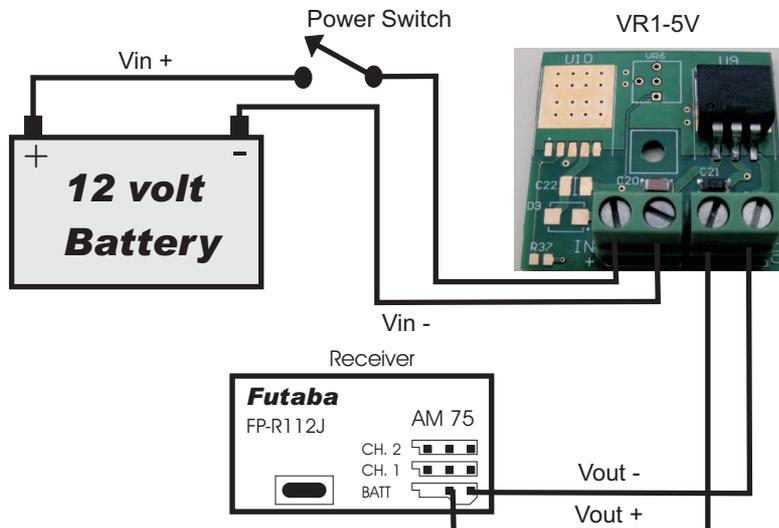
Use 18, 20 or 22 gauge wire. First strip 1/4 inch (5 mm) of insulation off the end of the wire to be connected as shown below on the left. Then insert the wire into the terminal and tighten the screw as shown on the right.



The battery input terminals are on the left while the output terminals are on the right, the positive is always on the left, as shown below.



Typical Application: Running RC receiver From a 12 volt battery



Mounting the Unit

The recommended way of mounting is to screw the unit to a wooden surface using the #4 wood screw included. Be careful to keep wires away from the U9 (the large black thing in the upper right) as it can get quite hot during operation.

Limited Warranty

This product is warranted against defects in parts or workmanship for a period of 1 year from date of purchase. EA Electronics does not assume any liability arising out of the use of this product.

This warranty is void if the product has been physically damaged or has been connected to a power source with the positive and negative wires reversed or operated above the maximum voltage. Any user modifications to the unit will void this warranty.

Technical Support

Technical support is available by calling:

905-619-1813 (Monday to Friday - 7pm to 10pm E.S.T.)

or contact us by E-MAIL at eaelec@sympatico.ca

EA Electronics
8 Maple St., Ajax, Ontario
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