

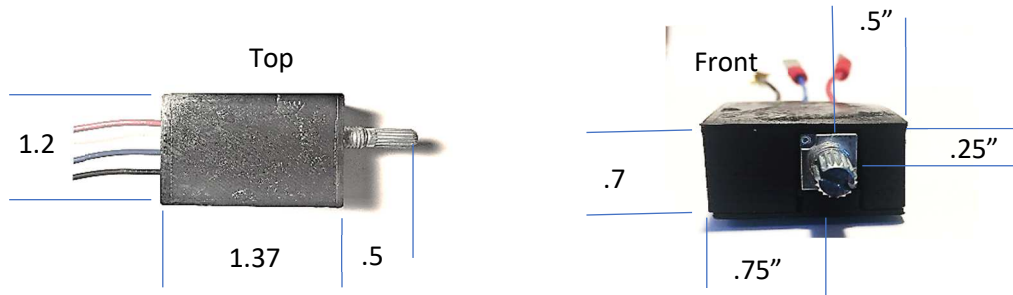
# Litezupp LPWM1 LED Dimmer Application

Unlike filament bulbs that can use a voltage-based rheostat to dim the bulb, LEDs require a controller that can vary the current through the device(s). Typically, there are two kinds, a Current Controller or a Pulse Width Modulation controller.

The LPWM1 is a pulse width modulation circuit that is used to vary the brightness of an LED cluster. Typical Dash LEDs draw approximately 50 – 100 ma with the LPWM1 controller capable of supplying up to 5 amps.

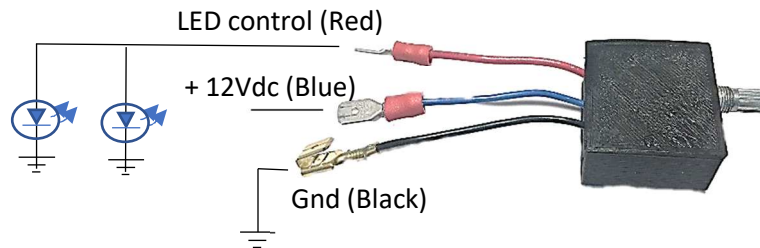
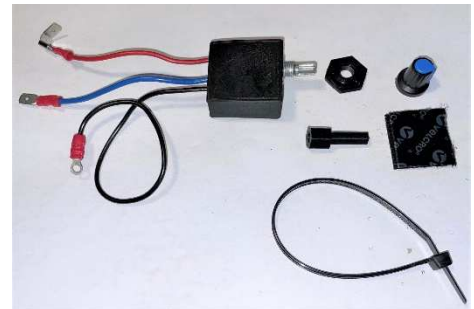
## Specifications:

- Input: 12V dc negative ground (positive ground unit is also available)
- Output: 12V dc PWM signal, max 5 A output, off/on position plus min to max brightness
- Dimensions (approx.) L (not including shaft) 1.375" x W 1.25" x .75"
- Shaft length .56", standard .23" (6mm) diameter



## Contents:

- PWM controller with connections for 12V power (blue), ground (black) and LED control (red).
- Plastic mounting nut and generic knob.
- Dual Male tab on "LED control" for multi LED connections.
- 6mm to 8mm shaft adaptor/extension for panel mounting
- Velcro pad and plastic wire tie for mounting



PWM controller - Typical application

## Installation:

The LPWM1 can be mounted under the dash using the supplied Velcro pad or as a replacement for the rheostat using the hardware supplied. **Note: some fiddling, mechanical placement and wiring modifications may be needed depending on your installation.**

If you are installing in a Triumph, we have attached the various “Dimmable Gauge and Dash light” configurations for various TR’s.

### 1. Under Dash Mounting

- Disconnect battery.
- Find a suitable and accessible location to mount the controller. Using the Velcro, peel off sticky back and attach to one side of the controller, peel off other sticky back and mount to location.
- Disconnect the input to the rheostat (for TRs it is a red wire) and with a length of wire connect the circuit to the +12V (Blue wire) of the LPWM1. Ensure connections are insulated.
- Disconnect the output of the rheostat (for TRs it is a red/white wire) and with a length of wire connect the circuit to the LED control output (red wire) of the LPWM1. Ensure connections are insulated.
- Using the supplied ground wire, connect to a good ground location and then connect to the ground (black) wire of the LPWM1.
- Reconnect the battery and test.

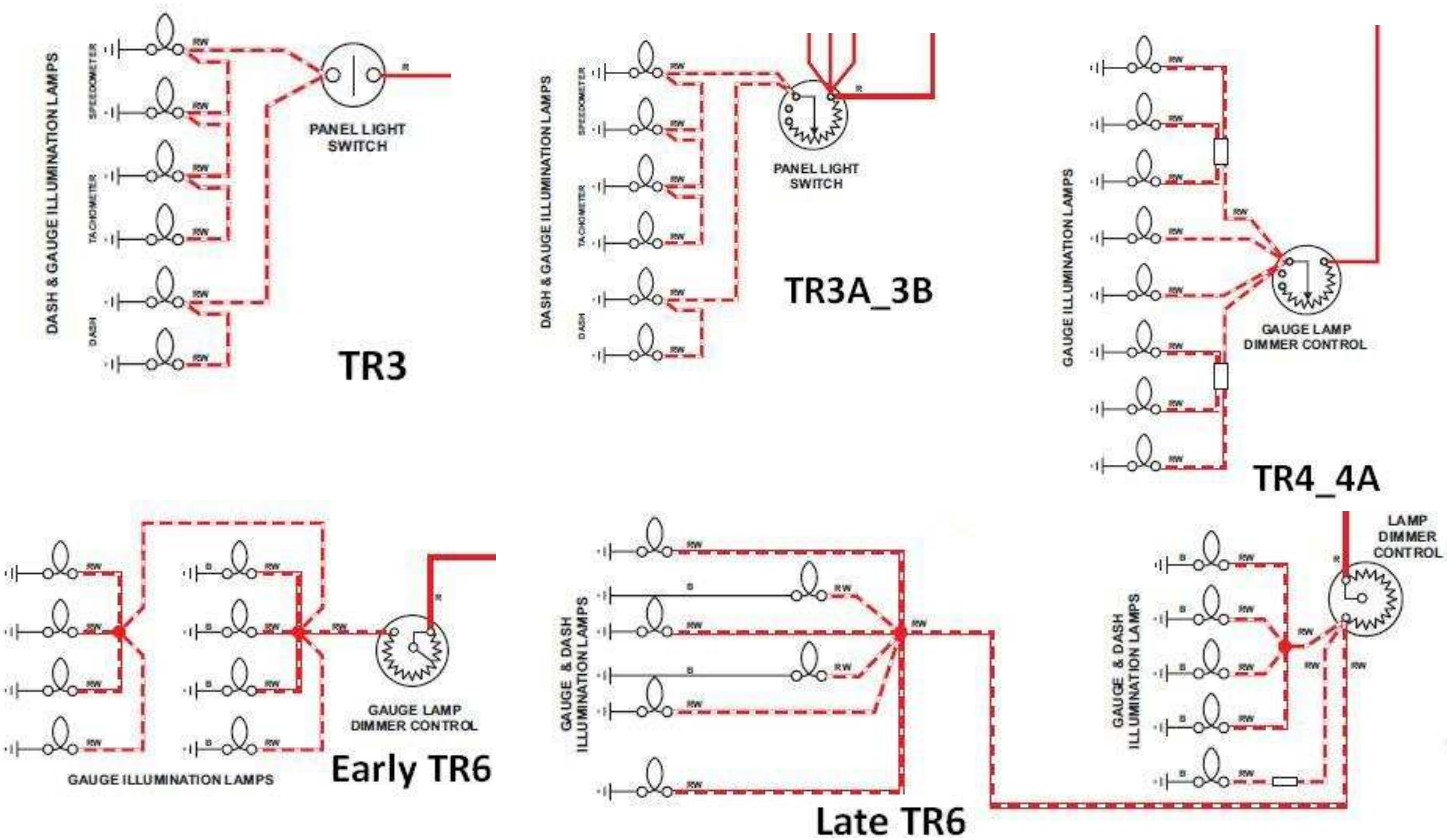
### 2. Dash Mounting

- Disconnect battery.
- It will be necessary to remove the dashboard in order to have access to mounting the controller.
- Remove the rheostat
- Mount the LPWM1 in place using the supplied mounting hardware or the optional larger threaded plastic nut.
- Attach the knob shaft adapter to LPWM1. The knob shaft adapter is provided to transition from the 6mm LPWM1 controller shaft to the larger TR knob shaft. Check to ensure the shaft adapter and knob fit up ok. This shaft adapter can be cut with a fine-tooth blade if too long. Note: some of the newer knobs have a smaller diameter hole. If so, filing the flats of the shaft can be done. If the shaft is too small, apply a wrap of masking tape to increase the diameter.
- Disconnect the input to the rheostat (for TRs it is a red wire) and connect the circuit to the +12V (Blue wire) of the LPWM1. Ensure connections are insulated.
- Disconnect the output of the rheostat (for TRs it is a red/white wire) and connect the circuit to the LED control output (red wire) of the LPWM1. Ensure connections are insulated.
- Using the supplied ground wire, connect to a good ground location and then connect to the ground (black) wire of the LPWM1.
- Reconnect the battery and test.



Contact [sales@litezupp.com](mailto:sales@litezupp.com) if you have any questions.

## Dimmable Gauge and Dash light configurations for Triumph TR3 – TR6



### Example:

