

Light Me Trailer Products

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Trailer - Vehicle Operated Light Tester (T-VOLT) *easy-faster-safer*

Website - www.t-volt.com.au

Patent Pending

T-VOLT will function test all trailer light circuits from tow vehicle, through problematic vehicle and trailer connectors. Purpose is to allow a single operator to quickly confirm ALL trailer lights operate before using trailer with a connected tow vehicle on the road.

T-VOLT is a vehicle mounted, vehicle activated, timed light circuit board controller, housed into IP66 rated plastic housing with electronics potted in compound, identified as the **T-VOLT automotive accessory module**.

T-VOLT controller is connected and wired in series into tow vehicle trailer light circuit loom at any point before the connection to the vehicle trailer connector.

T-VOLT tests all trailer light circuits in an automatic sequence. The operator activates T-VOLT, makes one trip to the rear of the trailer to observe timed ON/OFF switching sequence of trailer lights, individually activating –

- 1) Brake light,
- 2) Left Indicator,
- 3) Park light,
- 4) Right Indicator,
- 5) Reverse lights for each connected trailer light circuit.

Each individual light repeatedly switches ON/OFF in sequence for three seconds during a 60 second function test period which is powered from **tow vehicle park light circuit**. This is activated by **toggling tow vehicle park light switch on and off in sequence three times in three seconds, at one second intervals and leave ON**. Logic circuits detect activating the vehicle operated light test module test function. No additional wiring or switch controller device required. Testing automatically switches off when the test period of 60 seconds is completed.

T-VOLT is designed to be fail safe, should a fault occur with the test function of the internal electronics, all trailer light circuits will continue and operate normally.

T-VOLT internal circuits are designed that all light circuits switching contacts are normally closed in an unpowered rested state, providing a continuous circuit to each trailer light circuit when T-VOLT is not activated.

When T-VOLT is activated in test mode an integrated buzzer ensures the operator knows the test function is active. The buzzer volume can be increased by removing four screws and lifting the front cover, remove the foam pad from the buzzer to increase the volume levels, then replace the cover in reverse sequence, do not over tighten screws.

T-VOLT Specifications

Operating T-VOLT outside specifications detailed may damage this device, no warranty claims or refund accepted for misuse by exceeding these listed parameters.

- Voltage Range 11.5v - 16v DC.
- Supplied 2.5mm multi core cable, rated 6amps/83watts
- Max power rating of each light circuit = 83watts
- Test mode power rating of light circuit = 83watts
- No inbuilt fuses, relies on existing tow vehicle light circuit fuses
- Wired in series in tow vehicle trailer light circuit loom, before vehicle trailer connector.
- Typically mounted to rear of vehicle.
- T-VOLT uses standard vehicle/trailer colour codes to identify light circuit wires.
- T-VOLT has an **input circuit** and **output circuit**, must be wired correctly or void warranty.
- T-VOLT controller housing, **marking V = Vehicle wiring circuits. (IN)**
- T-VOLT controller housing, **marking T = Trailer wiring circuits. (OUT)**
- T-VOLT can be fitted to any existing or new style vehicle to trailer connector types.
- Brake Circuit, rated 6amps/83watts 2.5mm blue wire provides a solid continuous electrical circuit through the T-Volt module. Bypass T-VOLT controller if high current brake circuits are required above 2.5mm electrical cable current capacity.

Caution

Before driving tow vehicle with connected trailer, ensure T-VOLT light test sequence has finished, turn OFF the light test sequence at any stage, simply turn OFF the tow vehicle park light circuit once, continue to use park light circuit as required. The test function automatically switches off in 60 seconds from activation.

Mounting the T-VOLT accessory; module should be mounted securely in a clear position away from any tow vehicle fuel systems and moving parts. Mount accessory module with the lid vertically (not on top or Bottom), working with physics of the relay contacts, this recommended mounting will provide the better installation.

Some late model vehicles have light detecting circuits that pulses power to each light circuit, can cause T-VOLT logic circuit some confusion, if this occurs simply switch vehicle ignition OFF, reattempt activating T-VOLT via park light circuit ON/OFF sequence, retry activation as detailed, may take a couple attempts.

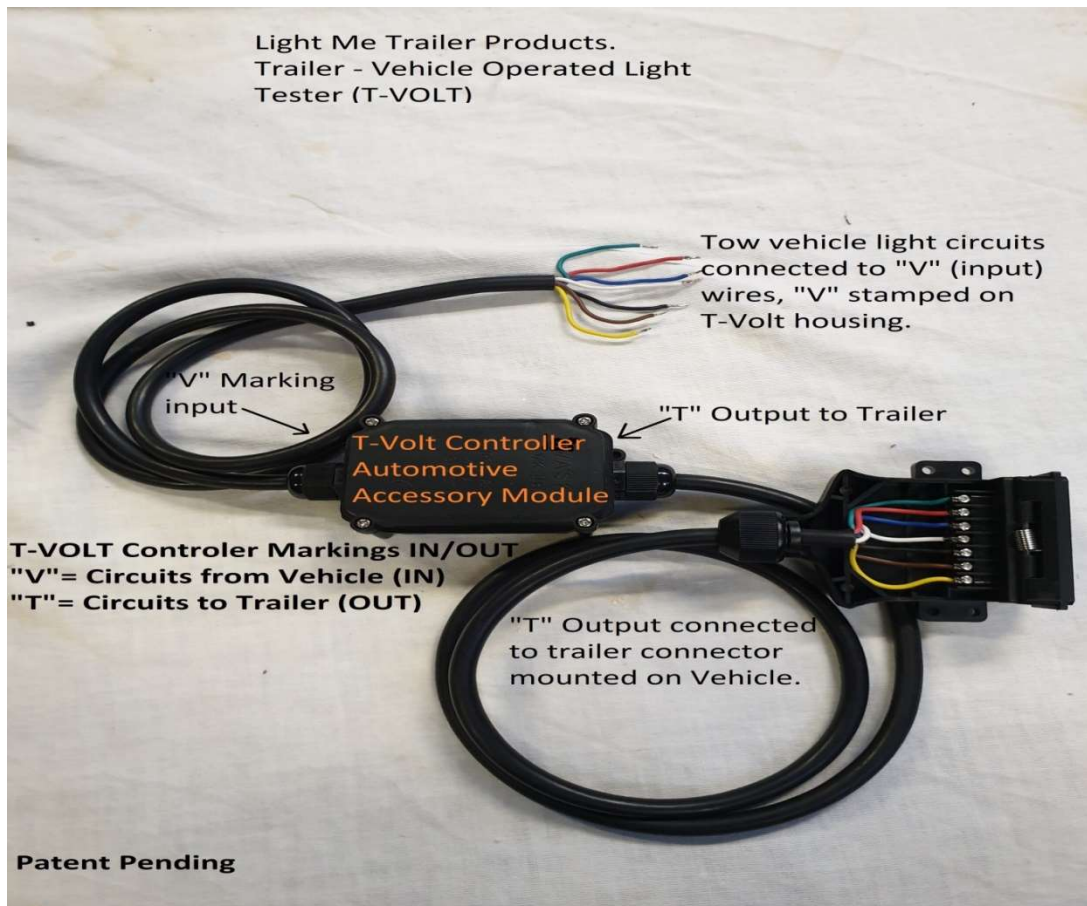
Identifying problems

T-VOLT will not activate -

- ✓ Check vehicle park circuit power or fuse to be Ok. T-VOLT is powered from vehicle park light circuit.
- ✓ Confirm park light socket power is 12v or greater at vehicle connector when park light is turned ON. Confirm battery volts of 12v, or start vehicle to ensure sufficient supply voltage at vehicle socket to operate T-VOLT. Voltage drop between vehicle park light circuit controller and T-VOLT input could be a problem possibly caused by a bad or loose connection, also confirm earth circuits.

T-VOLT will not activate trailer lights -

- ✓ Confirm vehicle to trailer earth circuit is continuous between pin and socket of both connectors.
- ✓ Further investigation of each individual light circuits when T-VOLT is not activated.
- ✓ If only one or two trailer circuits will not work, investigate further the vehicle and trailer connector pins and sockets mate firmly
- ✓ Confirm continuity of failed trailer light circuits, confirm light globes/ LEDs of the failed trailer lights.



Vehicle mounted Trailer socket

		T	V		
Left Turn	>	Socket 1/Yellow	<div>easy-faster-safer</div> <div>T-VOLT</div> <div>www.t-volt.com.au</div>	Yellow	Vehicle Circuits
Reverse	>	Socket 2/Black		Black	
Earth	>	Socket 3/White		White	
Right Turn	>	Socket 4/Green		Green	
Serv Brake	>	Socket 5/Blue		Blue	
Stop	>	Socket 6/Red		Red	
Park/Tail	>	Socket 7/Brown		Brown	

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