

OUT OF THE DARKNESS

Shines

Bulbs **THAT LAST
4 EVER**



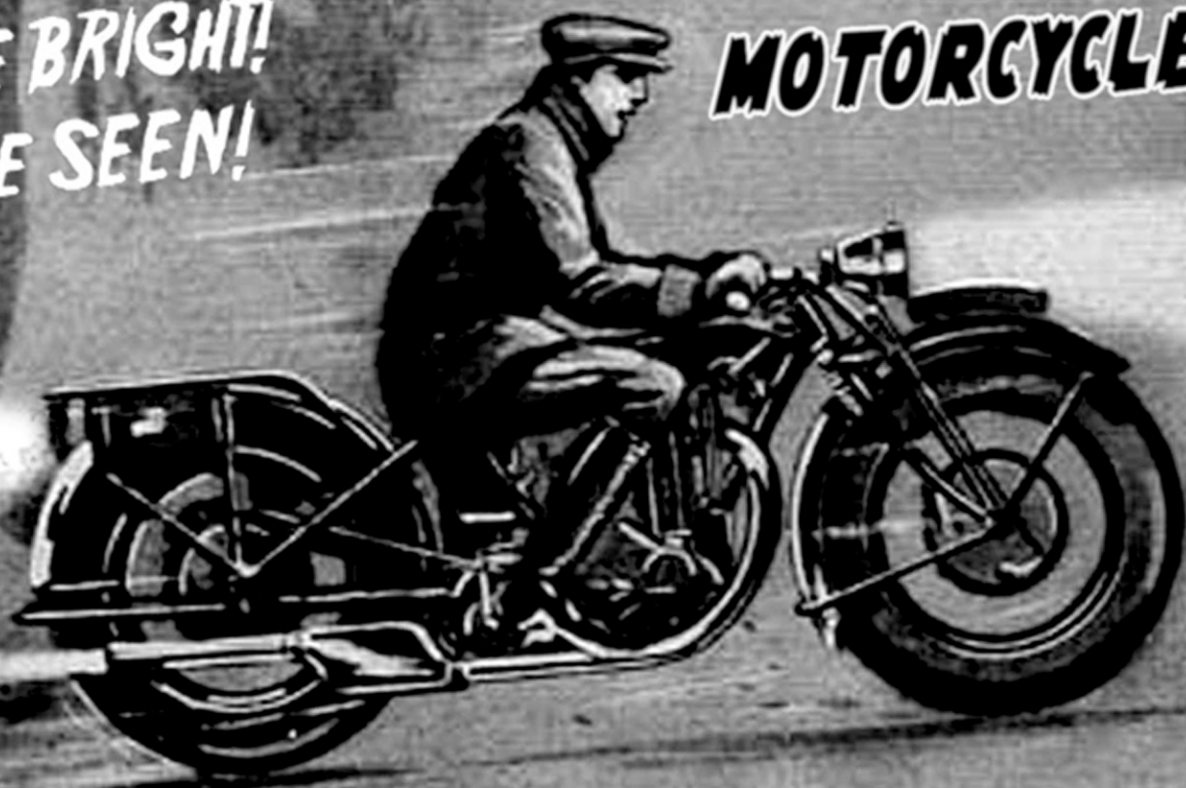
The Choice
of

LEADERS

FOR ALL TYPES OF

MOTORCYCLES

**BE BOLD!
BE BRIGHT!
BE SEEN!**



You can pay less elsewhere, but you will not reap the benefits enjoyed by 1000's of satisfied customers. Bulbs That Last 4 Ever utilises the highest quality materials available & is the only constructor that will create a unique lighting system specific to your needs. Visit our website & compare.

The proof is in the Illumination!

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Model: BTL4E-005 “Pulsar-RL” Electronic Flasher/Running Light Module **Installation & Operation Instructions:**

Thank you for choosing the Bulbthatlast4ever™ Model BLT4E-005 “Pulsar-RL” Electronic Flasher/Running Light Module. This unit has been designed for 12-14 VDC operation, this module is grounding system specific (BTL4E-005-PE – Positive Earth & BTL4E-005-NG – Negative Ground). This unit offers 4 user selectable flash patterns and the ease of connecting/using the “Running Light” feature offered in both our BTL4E-002 & CD1004 LED Winker Boards. This version has a new feature that allows the user to switch the Running Lights “ON” or “OFF” using a control voltage from the motorcycle, see below for more information regarding how to use this new feature. These installation instructions will cover the installation for both grounding system types.

Before you start to install this unit, carefully read and follow these installation instructions. Expect the installation to take approximately 30 minutes, utilizing a test-light or multi-meter (voltmeter), wire cutters/strippers, wire terminal crimp tool, jeweler screwdriver set and some other basic hand tools.

Getting Started:

Item Check List:

1. Qty 1, BTL4E-005 “Pulsar-RL” Electronic Flasher/Running Light Module
2. Qty 1, BTL4E-005 Input Screw Terminal Block/Wire Cable Assembly
3. Qty 1, Output Screw Terminal Block
4. Qty 1, ¼” Ring Crimp Terminal (not shown)

Note: This kit has been supplied with all the necessary items to install this unit. Sometimes these items may differ from any items shown or depicted anywhere in these installation instructions. Items are subject to change without notice at anytime.



Figure 1

Important Notice Before Starting: The BTL4E-005 “Pulsar-RL” was designed for use with most LED Replacement Bulbs available on the market and/or all of Bulbthatlast4ever products. Using this unit with other than the previously stated, such a standard filament type bulb, incandescent, halogen, or otherwise, rated greater than 10W may damage the unit and void any warranty offered. Protect your investment, Do not test unit or use any filament type bulb other than the indicator bulbs on your motorcycle at anytime!!!

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Installation:



Figure 2

1. Locate the stock flasher unit on your motorcycle; if the flasher is the same as shown in Figure 2, it may not have to be removed. If your flasher is other than shown, you will have to remove it and install a piece of wire to connect the 2 harness contacts together. *Refer to your motorcycle's shop manual for exact location on where to find the flasher.*
2. Locate where the wires for the signal switch connected the motorcycle's wiring harness, typically there are 3 wires (Left Signal, Right Signal, and Supply) for the signal switch. Disconnect all 3 of these wires from the harness; take note of the wire color and where they were plugged into for future reference. *Refer to your motorcycle's shop manual for the wiring diagram, it will be useful.*
3. **Finding the “Supply” without a shop manual:** To aid you to find out which of the 3 wires is the “Supply”, you may use either the test light or voltmeter, connect or touch one lead to the chassis or ground. Turn on the ignition switch. Then touch the probe of either the test-light or the other lead of the voltmeter to one of wires or contacts where the flasher was removed from. If using the test-light, the light will light up when the supply line has been located. If using the voltmeter, the meter will indicate a voltage value, if present.

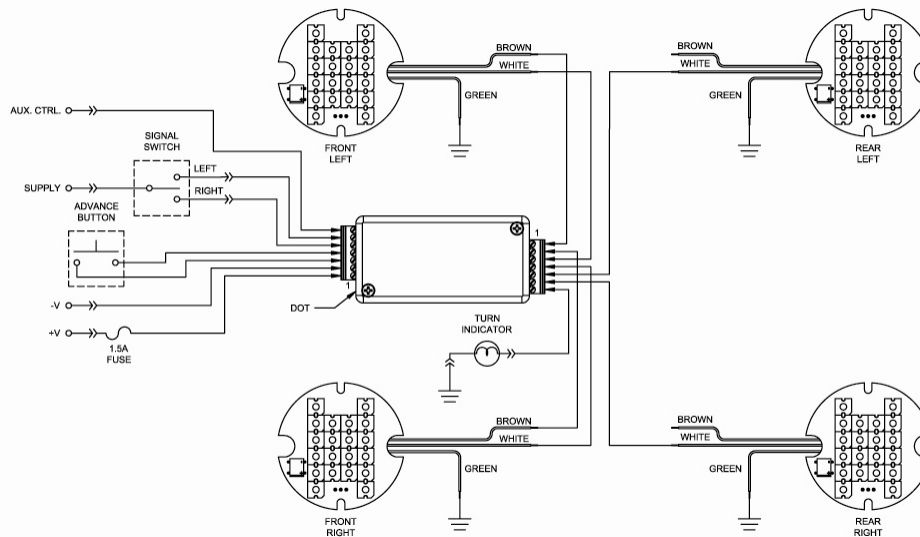


Figure 3

- **Connecting Power:** Before making any connections, select an appropriate location for the unit that will allow easy access to all the necessary wire connections shown above in Figure 3. Start by connecting the “Supply” wire from the harness to the “Black” (-V) wire of the BTL4E-005-PE (Positive Earth); connect the “Red” wire w/ fuse holder (+V) for BTL4E-005-NG (Negative Ground). Proceed to connect the

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“Red” wire w/ fuse holder (+V) of the BTL4E-005-PE to the system ground; connect the “Black” (-V) wire for BTL4E-005-NG to the system ground. A ring terminal has been supplied in this kit for connecting to a screw on the chassis. Install the ring terminal onto the appropriate wire color based on which unit model you will be installing, strip the insulation back about ¼” (6 mm) and install the ring terminal on the wire, crimp to secure it and then ground the ring terminal to a chassis bolt or screw. *If a system ground is not available via the chassis, then connect to a ground wire from the wiring harness. A single or several bullet connectors maybe required, which are not included in this kit.*

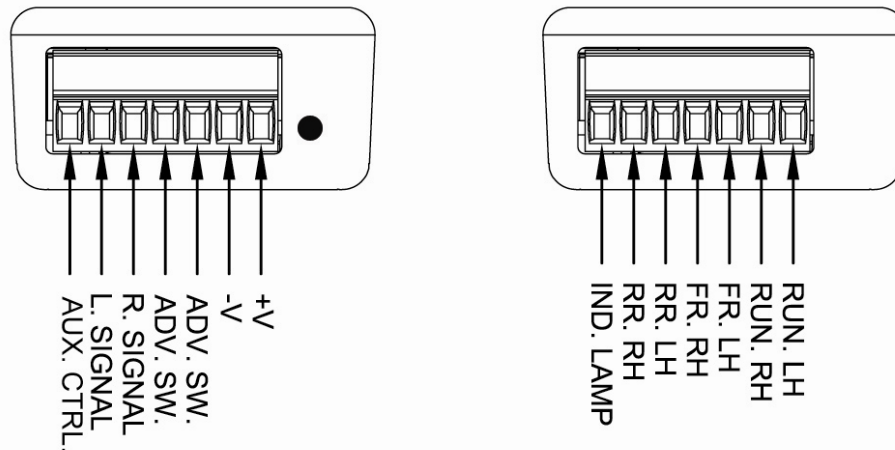


Figure 4

- Connecting Switches & LED Boards:** The following installation will require a small bladed screwdriver, commonly known as a jeweler screwdriver to tighten the screw terminals. Refer to Figure 3 on the previous page for a fully detailed “Hookup Diagram”. All the remaining items will be required to be connected directly to the unit, such as the signal switch wires (L & R), all 4 LED Boards, an indicator lamp, and a switched power lead, if use of the Running Lights is desired. Figure 4 shows all the terminal block locations with their labels/functions, one side of the unit has a “dot” marked on it, which indicates the end of the unit that the power is to be applied to. To use the Running Light Feature of this unit, simply connect a switched power source from the lighting switch or an instrument illumination lamp to the location labeled “AUX. CTRL.”. *Please note the following: The front LED Boards should be connected directly to the BTL4E-005 and the wires from the harness connected to the terminals labeled with “RR”. It is also important to install the motorcycle’s winker indicator lamp directly to the BTL4E-005 Module as illustrated in Figure 3, since it will be used as your programming indicator; the unconnected end of the indicator lamp should be connected to ground in order to function correctly.*

Note: It is not recommended to connect the rear “Running Lights”, this due to that some states do not permit the use of rear amber running lights, which could result in a citation. Please refer to your state and local laws before considering connecting the rear running lights to use this feature.

- You are almost done with the installation. Hopefully the location that you selected in “Step 3”, will not directly subject the unit to water, accumulated, run-off, mist, vapor, or otherwise. Then secure the unit and its wire cables to your motorcycle, so that it will not be able to move around freely. You may secure the unit by any means you like, such as double-sided tape, Velcro, cable ties, or etc... If needed, the cables can be removed from the unit by simply pulling on the either green terminal blocks on either side of the unit’s enclosure.

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Installation & Operation Instructions:

5. Install the pushbutton in a convenient and accessible location, if you decide to use it to change the flash patterns quite often or while riding the motorcycle. Be sure to route the pushbutton’s cable so it was not interfere with any controls of the motorcycle.

Operating Instructions V2.0:

Power Up:

Whenever power is applied to the unit; it will run a self diagnostic, which will turn “ON” all the lights for about 2 seconds. Then both the front running lights will come “ON” briefly and then “OFF”, if a voltage is not applied to the “AUX. CTRL.” input. This is by factory default, which cannot be changed or be disabled. If any light does not light during the power-up sequence, please verify the hookup and/or wiring, or contact our Tech Support for assistance.

Pattern Advances:

“Press and Hold” the pushbutton until the indicator lamp flashes and then release the button; the number of flashes indicates the current selected (e.g. 2 flashes means Pattern 2 is selected). Continuing to hold the button will cause the indicator lamp and the 2 front signals to simultaneously turn “ON” to indicate a “Pattern Advance” has been initiated, release the button to advance to the next pattern. If the button was released in time, 3 flashes will be followed to confirm the “Pattern Advance” was accepted. If not, the unit will be reset to “Pattern 1”.

Pattern #	Pattern Name	Description
*1	Fast Flash	90 PPM, Universal
2	The Pointer	3 Flashes then “ON”
3	The Wave	4 Flashes then 3 Quick
4	Strobe	2 Quick Flashes then “OFF”
* Meets DOT and most 50 States Turn Signal Flash Rate Requirements. Check your local and State laws regarding Turn Signal Flashing Rates for all other “Patterns” offered. (PPM- Pulses Per Minute)		

Reset/Panic:

You may need to reset the flash pattern to default for a verity of reasons. Simply press and hold the pushbutton for 3 or more seconds and then releasing it. This will reset the unit to default, Pattern 1.

Troubleshooting Section:

Symptom	Possible Cause	Remedy
Unit will not turn on.	Bad, loose, or open connection. No power or ground present. Blown Fuse	Check all connections. Verify supply or grounds are active. Replace fuse (1.5A).
Constantly blows fuses when a signal switch is turned on.	A short circuit is present in the signal circuit.	Inspect all connections to both front and rear turn signals. Look for worn away insulation on wires from the wiring harness or wires laying on sharp edges, warp with electrical tape to insulate wire.

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Can not change patterns or indicator is not light when button is pressed.	Poor connector engagement. Broken wires to pushbutton.	Disconnect the cable connector from the unit and plug it in again. Inspect the wires going into the terminal block; tighten any loose wires by tightening the screws. Inspect the entire length of pushbutton wires for signs of damage or being pinched between two items of the motorcycle. Repair as necessary.
Unable to get pattern to change	Holding the pushbutton longer than 3 seconds before releasing.	Refer to “Pattern Advances” in the operation instructions for the proper procedure.
When unit is “Powered-up”, the indicators will not turn off.	Unknown	Contact Bulbthatlast4ever Tech Support to return unit for evaluation.
Smoke is observed followed by a strange smell.	Improper installation. Using a fuse rated >1.5A. Bypassing the fuse. Applying improper supply voltage or voltage type to the unit.	<u>PRODUCT WARRANTY IS IMMEDIATELY VOIDED!!!</u> Refer to Product Warranty Agreement for more information. Contact Bulbthatlast4ever Tech Support to return unit for repair.

Replacement Fuses:

Must be rated at 1.5A, which can be purchased from most electronic suppliers/retailers or automotive part stores.

Product Support:

On-line Technical Support available by e-mail at techsupport@bulbthatlast4ever.com

Repairs/Returns: Please do not return the unit to the retailer that it was purchased from, they will not be able to honor our warranty. Please visit this webpage <http://bulbthatlast4ever.com/returns.html> first or call our Help Line at (1) 818-239-2683 for returning instructions.

Warranty Info: Please refer to the attached “Product Warranty Agreement” for more details.

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Product Warranty Agreement:

Bulbthatlast4ever warrants all our products, standard, custom, or otherwise against defects in material or workmanship as follows:

1. For a period of 365 days from the date of purchase if this Product is determined to be defective, Bulbthatlast4ever will repair the Product at no charge. After the 365 days period, you must pay a \$10 "Evaluation Charge", labor rate of \$15 per hour, and cost of replacement components. This warranty does not cover cost incurred in connection with the use of un-approved aftermarket accessories used with this Product.
2. To obtain warranty service, you must fill out a "Request for Repair" Form available on-line at <http://www.bulbthatlast4ever.com/contact/returns.html> or call our Help Line at (1) 818-239-2683 for a "Return Product Authorization". Package the product in either its original packaging or some other packing offering an equal degree of protection. Then ship the package to Bulbthatlast4ever as per the information provided on the "Request for Repair" form or provided to you over the phone. The return shipping cost is the sole responsibility of the sender.

This warranty does not cover the following items listed herein, any implications of following items "WILL VOID" the Product warranty immediately and indefinitely, but are not limited to the listed below:

- Cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, improper use or maintenance, connection to improper voltage supply, or attempted repair by anyone other than a facility authorized by Bulbthatlast4ever to service this Product.
- Unauthorized customer or end-user modifications, such as grinding, filing, cutting, drilling, or by any other mechanical means with intent to alter the shape or size of the printed circuit board assembly/ies.
- Installation of non-factory approved replacement parts soldered into/onto the printed board assembly/ies such as but not limited to resistors, LEDs, headers, or any other electronic component active or passive used in or on our products. In the case of printed circuit board assembly/ies with factory omitted components, inserting and soldering components or anything into these locations.
- Improper handling of Class I or Class II ESD (Electro-Static Discharge) rated components as per the individual component manufactures handling procedures or datasheet precautions.
- Any damage received to any of the electrical pathways (traces) of the printed circuit board assembly/ies by one more but not limited to the following means, electrical overload, mechanical interference, environmental conditions, deliberate damage inflicted by human or any man-made machine, and/or improper installation of the product.
- Any damage received to the printed circuit board assembly/ies that has resulted due to contact with any type of liquid or fluid, natural or otherwise, but not limited to the following examples, water (fresh or salt-water), gasoline (petrol), any petroleum based products, solvents or cleaners used outside of the manufacturing process.
- Damages that are sustained by accidental damaged such as being involved in a motor vehicle accident of any kind. Accidentally dropping the product onto any surface harder than the printed circuit board assembly/ies or its components.
- Damages that may occur from a vehicle's electrical or charging system that is found not to be properly functional to the manufactures specifications.

Proof of purchase in the form of a bill of sale, receipt invoice, or vendor sales slip, which is evidence of that the unit is within the Warranty period must be presented to obtain warranty service.

Bulbthatlast4ever reserves the right to refuse any product warranty based on any reason listed above. Bulbthatlast4ever also reserves the right to honor or refuse any warranty repair for any reason based upon any signs or suspicion of product tampering to the above-mentioned Product.

This Product Warranty Agreement precedes all previous warranties or agreements.