

OUT OF THE DARKNESS

Shines

Bulbs **THAT LAST
4 EVER**



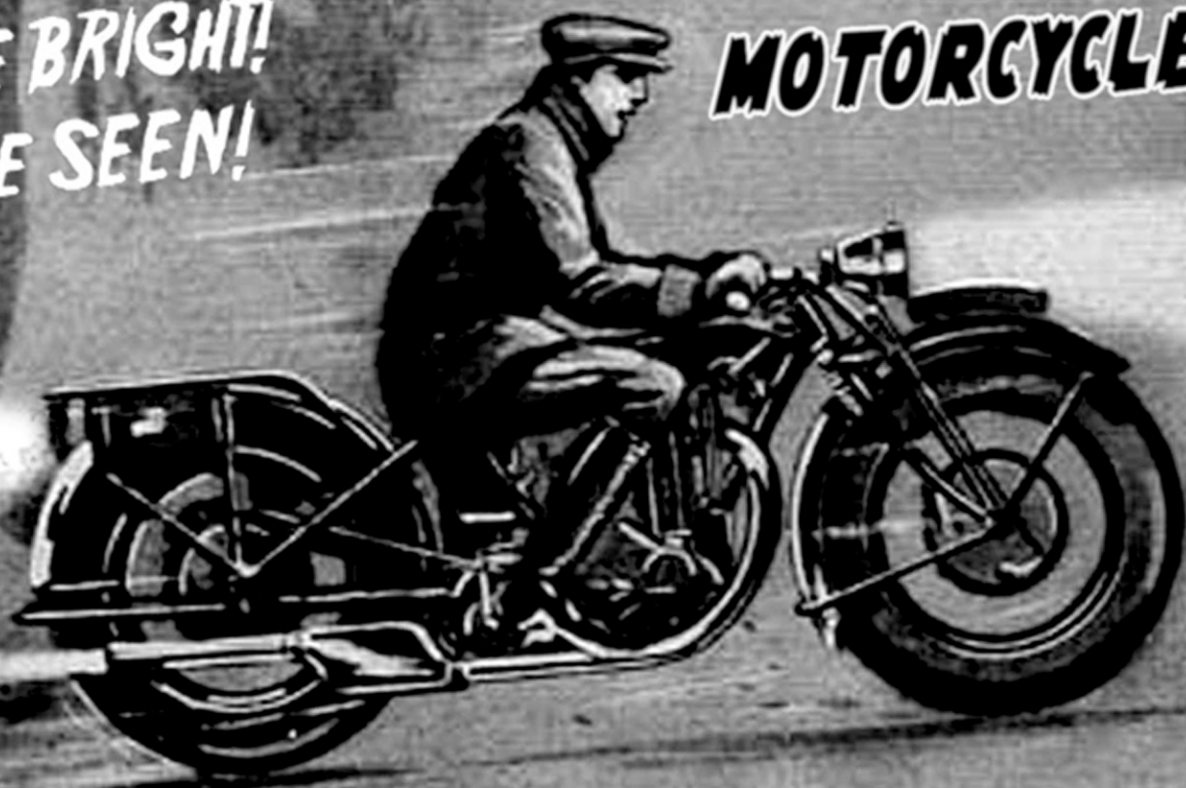
The Choice
of

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!

www.bulbthatlast4ever.com

Model: BTL4E-004 V2.0 “Pulsar” Electronic LED Turn Signal Flasher Unit **Installation & Operation Instructions:**

Thank you for choosing the Bulbthatlast4ever™ Model BLT4E-004 “Pulsar” Electronic LED Turn Signal Flasher Unit. This unit has been designed for 12-14 VDC operation with either Positive or Negative Grounding Systems refer the installation section of this document for further details for proper wiring and setup.

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, and some other basic hand tools.

Getting Started:

Item Check List:

1. Qty 1, BTL4E-004 “Pulsar” Electronic Flasher Assembly
2. Qty 1, BTL4E-004 Wire Cable Assembly
3. 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 Notices, Read Before Starting: The BTL4E-004 “Pulsar” was designed for use with most LED Replacement Bulbs available on the market and/or all of Bulbthatlast4ever products. This unit is not intended for use with standard incandescent, halogen, or other filament type of bulbs rated greater than 10 Watts, these may damage the unit and void any warranty offered. Protect you investment, do not test unit or use any filament type bulb other than the stock indicator bulb on your motorcycle at anytime!!!

This unit is user selectable for use with either Positive Earth or Negative Ground Systems. The default factory setting is set for Negative Ground use. If this unit is to be used with Positive Earth (Ground), this setting will have to be changed. Refer to section “Selecting Grounding Type” for further details. Otherwise no further action is required.

This unit has built-in over current protection, however it may not protect the unit from a direct short-circuit, which may cause damage directly to the unit and cause it not to function. Be careful not to subject this unit to this type of condition, if all possible...

Disclaimer:

Under no circumstances will Bulbthatlast4ever or it's representatives be responsible or liable for any incidental or consequential property damages or personal injuries arising from or in connection with the use or installation of any of the listed foregoing products or devices. Rev. 8/09

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Installation:



Figure 2

1. Locate the stock flasher unit on your motorcycle and remove it. *Refer to your motorcycle's shop manual.*
2. Using either the test light or voltmeter, connect or touch one lead to the chassis or ground. Turn on the ignition switch.
3. 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.

Important Notice: *Verify which grounding type your motorcycle is using before performing one of the following procedures. This can simply be done by seeing which terminal of the battery is connected to the motorcycle's chassis or frame.*

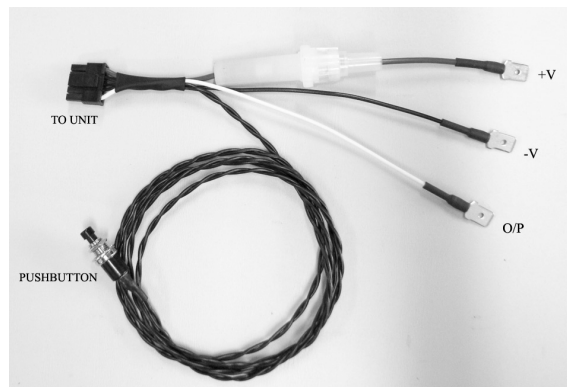


Figure 3

- **Positive Earth:** Connect the black wire (-V) into the contact that indicated power was present. Plug the white wire (O/P) into the other contact, which did not have any power present. Turn off the ignition switch. Cut off the connector on the red wire w/ fuse holder (+V); strip the insulation back about ¼” (6 mm) and install the ring terminal on the wire, then ground the ring terminal to a chassis bolt or screw. If ground is not available via the chassis, then connect to an earth (ground) wire from the wiring harness.
- **Negative Ground:** Connect red wire w/ fuse holder (+V) into the contact that indicated power was present. Plug the white wire (O/P) into the other contact, which did not have any power present. Turn off the ignition switch. Cut off the connector on the black wire (-V); strip the insulation back about ¼” (6 mm) and install the ring terminal on the wire, then ground the ring terminal to a chassis bolt or screw. If ground is not available via the chassis, then connect to a ground wire from the wiring harness.

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4. You are almost done. All is left is to plug in the connector from the Wire Cable Assembly into the connector on top of the BTL4E-004 “Pulsar” Flasher Unit (Figure 3) firmly push the connector until the tab engages the lock. Select a location that will not directly subject the unit to water, accumulated, run-off, mist, vapor, or otherwise. Then secure the unit and the wire cable 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 cable can be removed from the unit by simply squeezing the tab on the connector shown in Figure 4 and pulling on the unit enclosure in the opposite direction of the cable assembly.

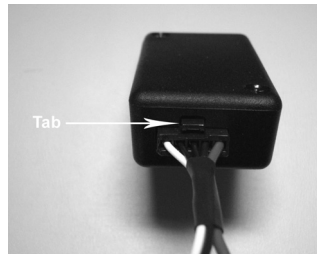


Figure 4

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 for V2.0:

Selecting Grounding Type:

- Hold in the pushbutton and turn on the ignition switch to power the unit. Once the unit has powered up release the button, a beep or 2 beeps will be heard, these beeps represent the current “Ground Type” setting (1 Beep – Negative, 2 Beeps – Positive). To change the setting, hold the pushbutton until a series of 3 short beeps are heard and then release the button. The unit will then beep the setting number. To accept the setting, turn off the unit and turn it on again. The unit will run in flasher mode after power up.

Pattern Advances:

- Pressing the pushbutton once will cause the unit to confirm the selected pattern number that has been selected. The unit will sound a series of beeps, the number of beeps heard represents the currently selected Pattern (e.g. 1 beep = Pattern 1). If a “Pattern Advance” is desired, continue to hold the button until 2 short beeps followed by a single long beep is heard. It is recommended to release the button after the first 2 beeps are heard to allow the “Pattern Advance” to be accepted. Failure to release the button in time will cause the flasher unit to reset to Pattern 1.

Pattern #	Pattern Name	Description
*1	Slow Flash	60 PPM, Universal
*2	Fast Flash	90 PPM, Universal
3	The Pointer	3 Flashes then “ON”
4	The Wave	4 Flashes then 3 Quick
5	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)		

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Installation & Operation Instructions:

Reset/Panic:

- Returning the unit to the default pattern is done by simply pressing and holding the pushbutton for 2 or more seconds and then releasing it. This will reset the unit back to default, Pattern 1.

Troubleshooting Section:

Symptom	Cause	Remedy
Unit will not turn on.	Bad, loose, or open connection. No power or ground present.	Check all connections. Verify supply or grounds are active.
Can not change patterns or buzzer is not heard 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 connector housing, push any loose wires back into the connector. 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 2-3 seconds before releasing.	Refer to “Pattern Advances” in the operation instructions for the proper procedure.
When unit is “Powered-up”, the buzzer will not stop buzzing.	Unknown	Contact Bulbthatlast4ever Tech Support to return unit for evaluation.
Smoke is observed followed by strange smell.	Improper voltage polarity applied to unit during installation. Applying improper supply voltage or voltage type to the unit.	Contact Bulbthatlast4ever Tech Support to return unit for repair. <u>PRODUCT WARRANTY IS IMMEDIATELY VOIDED!!!</u> Refer to Product Warranty Agreement for more information.

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.

Disclaimer:

Under no circumstances will Bulbthatlast4ever or it's representatives be responsible or liable for any incidental or consequential property damages or personal injuries arising from or in connection with the use or installation of any of the listed foregoing products or devices. Rev. 8/09



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.