

# Gen 2 Third Brake Light Pulsar User Guide

## Gen2 Third Brake Light Pulsar Kit Contents:

- One Gen 2 Third Brake Light Pulsar
- Two 12" extension wires (red & black)
- Four wire crimp lugs



## Pulsar Features:

- ✓ Versatile Design: the Gen 2 Third Brake Light Pulsar is designed to function with any type of brake light (LED or incandescent bulb) which runs off the standard 12VDC car battery
- ✓ High Current Capability: support up to 10A of continuous current (over 120 Watts @ 12V DC)
- ✓ User selectable "Long" or "Short" pulse duration
- ✓ SmartPulse™ Technology: advanced circuit design which monitors and reduces excessive pulsing function when brakes are engaged in stop & go traffic (user selectable)
- ✓ EuroStyle wire terminals for easy installation (no expensive custom harness required)
- ✓ Lead Free Product: Eco Friendly
- ✓ Compact Size: 2" x 0.5" x 3/8" (L x W x H)
- ✓ Designed in the USA

## Pulsar Settings:

The Pulsar comes set with the following default jumper settings already applied:

- **Pulse Duration** = "**Short**" (pulse duration ~ 3 seconds)
- **SmartPulse™** = "**Enabled**" (pulse functions will temporarily cease when repetitive brake application are detected)

**SmartPulse™ Setting (Figure 1):** to disable the SmartPulse™ function, remove the jumper from "**J4**". With this jumper removed, the Pulsar will pulse the brake light every time the brakes are pressed.

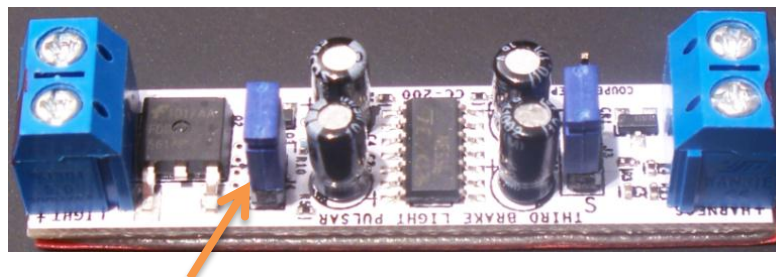


Figure 1: Location of SmartPulse™ Jumper J4

**Pulse Duration Setting (Figure 2):**

- To set the pulse duration to **“Long”** (~6 seconds), move the jumper located on the 1x3 header “J3” so that the jumper is installed between the center pin and the outside pin positioned next to the **“L”**
- To set the pulse duration to **“Short”** (~3 seconds), move the jumper located on the 1x3 header “J3” so that the jumper is installed between the center pin and the outside pin next to the **“S” (default)**

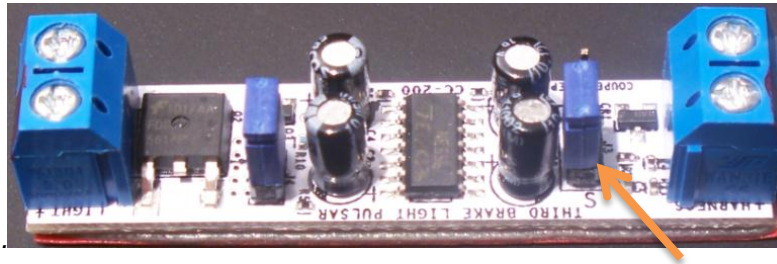


Figure 2: Location of Pulse Duration Jumper (“Short” pulse setting shown above)

**Warning:** Do not remove BOTH J3 (pulse duration jumper) and J4 (SmartPulse™ jumper) as this will cause the Pulsar to continuously flash the brake light without stopping. This mode of operation is not recommended.

# Pulsar General Installation Instructions

- 1.) Before starting the install, collect the necessary tools required for the job. Additional tools may be required to gain access to the third brake light wires.

## Installation Tools:

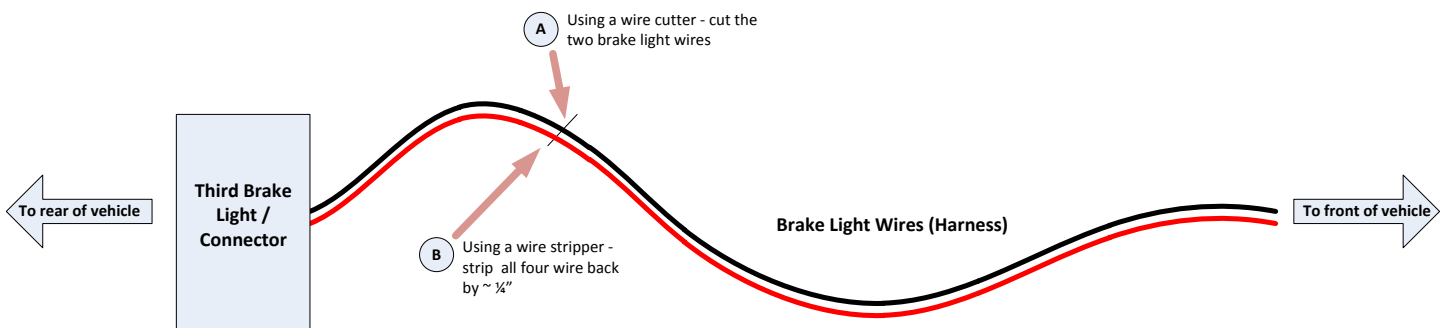
- Wire cutter / stripper
- Small flat head or phillips screwdriver
- Wire crimper (optional)
- Multi-meter (optional)

- 2.) Gain access to the vehicle's third brake light through the rear trunk housing or deck lid utilizing common hand tools.
- 3.) Once the light has been removed, unplug the wire harness from the light and remove the harness from the clips to allow you to work.



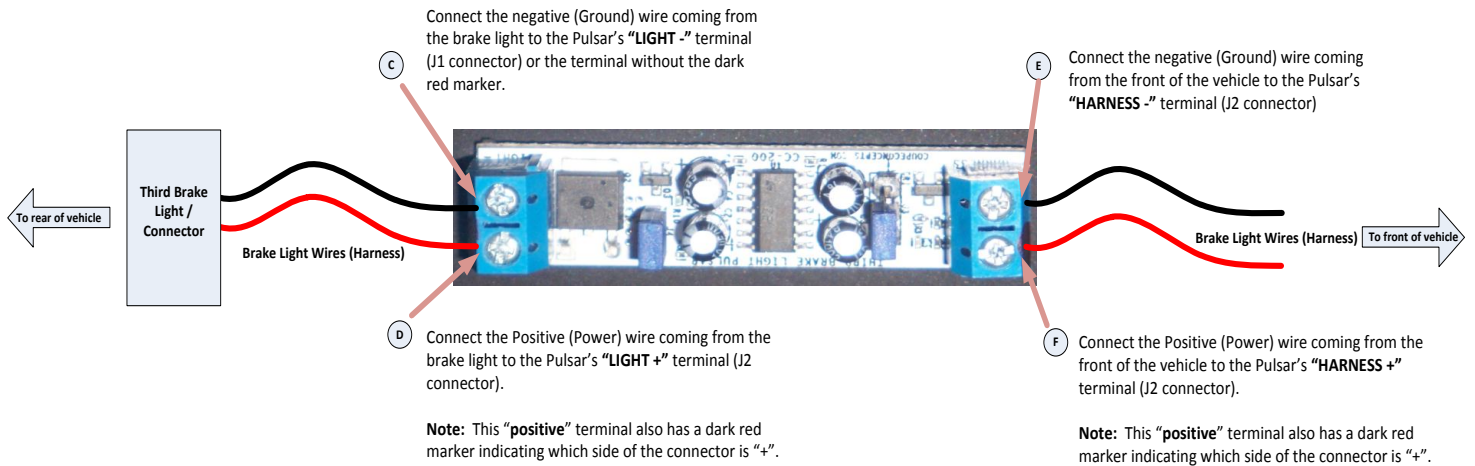
**Figure 3 – Example brake light wire harness & clips**

- 4.) Cut the third brake light wires as shown in **Figure 4 - Steps A and B**
  - a. Do not cut the harness too close to the brake light connector



**Figure 4 – Cut and strip brake light wires**

- 5.) Connect the Pulsar to the vehicle's brake light wires as shown in **Figure 5 – steps C,D, E, and F:**
- a. Ensure screws are tight after inserting exposed wire into the screw terminal connectors



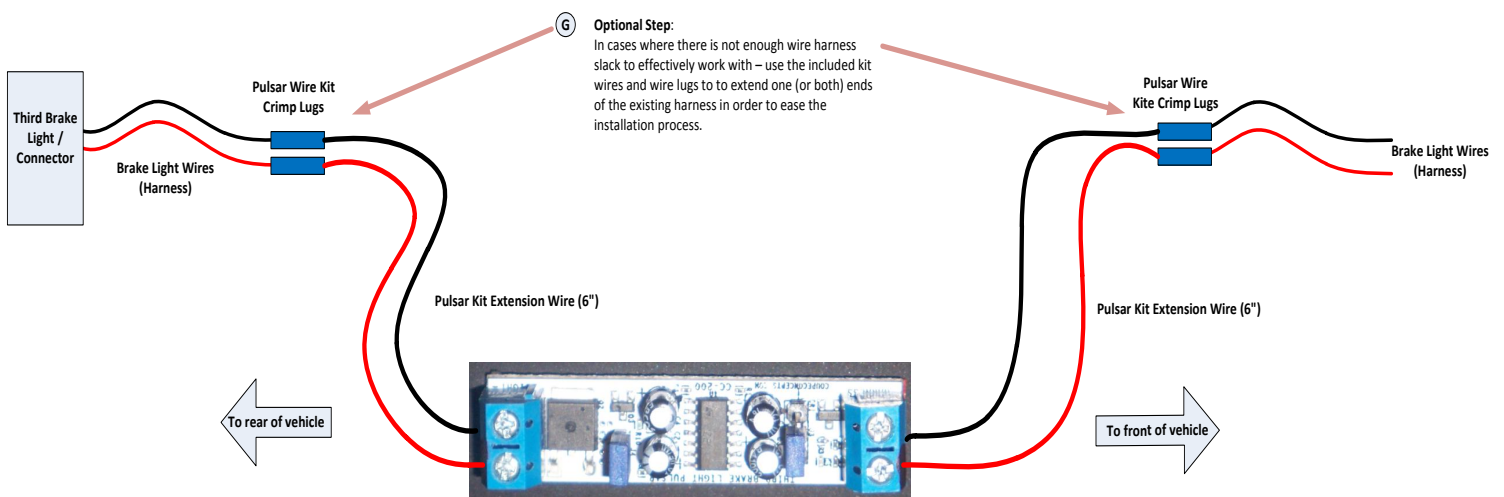
**Figure 5 – Connecting the Pulsar to the brake wires/harness**

**Note:**

- If the vehicle's wire color does not clearly indicate which is positive or negative, a multi-meter can be used to measure the voltage across wires E and F (when the brake is activated) to determine which is positive.
- In the event a multi-meter is not available, connect the wires using a "best guess" and any connection issues will be resolved during the functional checkout portion of this document.

**Optional Step:**

In the event the vehicle's wire harness does not have enough slack or play in it to facilitate steps C thru F, then utilizing the included wire extensions may be required as shown in **Figure 6.**



**Figure 6 – Adding extension wires to the cable harness**

# Functional Checkout

- 6.) With the Pulsar now connected to the vehicle's wiring (*but NOT installed back into the vehicle just yet*), perform the following steps:
- a. Power on the vehicle such that the brake lights activate when pressed. Press the brake and check to see if the third brake light pulses and then stops. If the Pulsar works, process to (b). If the Pulsar does not work, proceed to the **Troubleshooting Guide section**.
  - b. Double check the user settings and experiment with them if needed in order to determine your desired mode of operation.
  - c. Once you have finalized your settings, the Pulsar can now be fully installed back into the vehicle. The Pulsar can be placed loose into a small cavity or the red tape backing can be removed allowing the Pulsar to be adhered to a flat surface

*Warning: Do not remove the grey portion of the tape from the bottom of the Pulsar as doing so may damage the Pulsar.*

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# Troubleshooting Guide

Perform the following troubleshooting steps in the following order:

1. Confirm that the other brake lights illuminate during the Pulsar functional test. If they do not, then either the vehicle is not turned on or the vehicle's fuse is blown. Turn on the vehicle and re-test the Pulsar. Replace fuses if necessary.
2. Double check to ensure that the third brake light has been securely attached back to the vehicle's wiring harness (if it was removed during the install)
3. If wire extensions were used (**Figure 6 example**), double check to ensure that the striped wires are properly crimped and secure within the crimp lugs.
4. Swap (reverse) wires C and D (see **Figure 5**) and test Pulsar functionally again
  - a. If still non-functional, swap wires C and D back and proceed to step 4
5. Swap (reverse) wires E and F (see **Figure 5**) and test Pulsar functionally again
  - a. If still non-functional, swap (reverse) wires C and D once again and retest Pulsar functionality leaving wires C and D swapped (reversed).