

The BMU (Bulb Monitor Unit)

The Bulb Monitor Unit and what it does: The BMU is a relay of sorts. It does three things:

- 1) Tests the brake switches. When you start the bike up, it illuminates the red "triangle light" in the center of the instrument cluster. Once you've hit both brakes, it should go out. If it doesn't then one of your brake switches is probably bad.
- 2) Tests the tail light.
- 3) Tests the brake light.

It's a safety device so you're not running around with a bad brake switch or lights that are out.

Note that the "triangle light" may flicker or go solid while you're riding. Sometimes this is caused by a tail or brake light bulb getting old even though it lights up as it should. Try cleaning the contacts in the socket or replacing the bulb.

Also note that if you've got Run-n-Lites in your rear turn signals that makes the BMU happy even if your tail light does go out. So if you've got Run-n-Lites you might want to visually inspect your tail light bulb occasionally.

LED brake and tail light bulbs: Since an LED is a Light Emitting DIODE, it only allows current to flow one way and has a very small load. Some LED bulbs are polarized and some are not. If you get a polarized one then the bulb monitor will not be happy and keep the triangle light lit.

You can cure this by getting rid of the BMU. The BMU is the black box on the left side of the relay box right in front of the fuses. Once you've removed it, short the following wires in the BMU socket:

Short the front brake switch wire(Gray/Red) and the rear brake switch wire(Gray/Green) to the rear brake light(Gray/Yellow.)

Short the tail light power(gray/white) to the tail light wire(Gray/Black)

Note that since you removed the BMU, it's safety functions of testing the switches and bulbs is gone so it's a good idea to add checking those to your pre-ride checklist.

LED brake lights and the Audiovox CCS-100 cruise control: Similar to the BMU, the CCS-100 sends a small reverse current through your brake light bulb to know that your brake lighting is working properly. So if you install an LED brake light it might also disable your cruise control. This can be cured by adding a normally closed relay that grounds the CCS-100 purple wire when the brakes are not in use.

If you use a standard automotive relay for this (a.k.a. Bosch relay) then you want to get a five pin relay that has a normally closed terminal which will be labeled 87a.

Wire the brake light relay as follows:

- 85: Ground
- 86: Tapped into yellow wire from the rear brake switch
- 30: Ground
- 87a: CCS-100 Purple wire

