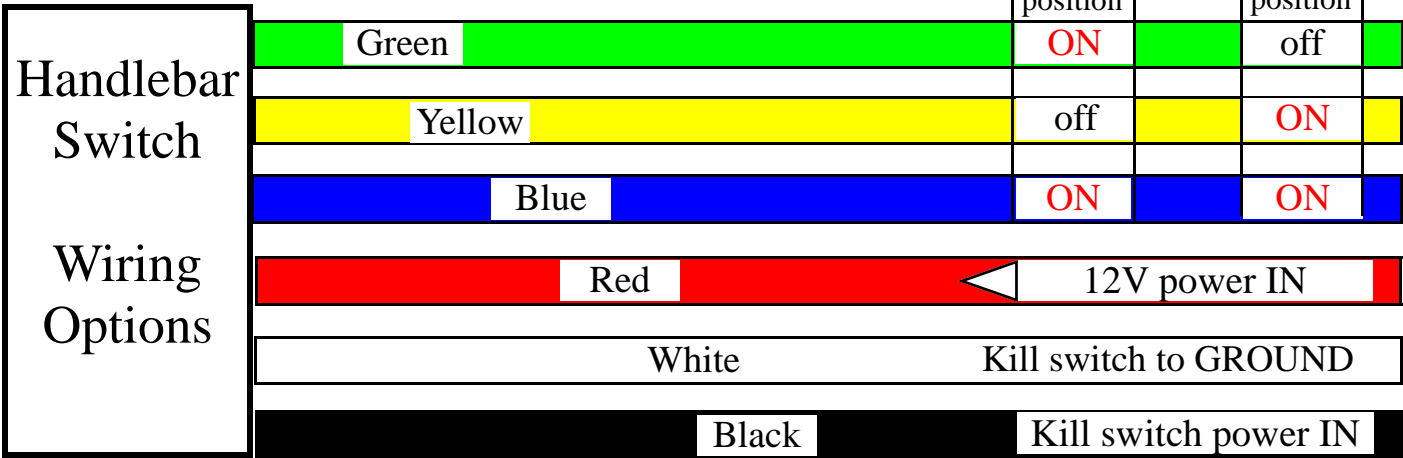


# SW 3

Trail Tech Handlebar Switch 040-HBS-02  
3 position switch OFF / Low / High + kill switch

Switch in LOW position	Switch in HIGH position
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**Typical Wiring:** Above sketch shows the typical wiring options for the Trail Tech 3 position switch, per their technical data. Red wire is power coming in from your battery or another "hot" 12 volt source.

Connect an accessory to the green wire: the accessory will be ON when the switch is set to the LOW position. In the HIGH position that accessory will be OFF.

Connect an accessory to the yellow wire: the accessory will be ON when the switch is set to the HIGH position. In the LOW position that accessory will be OFF.

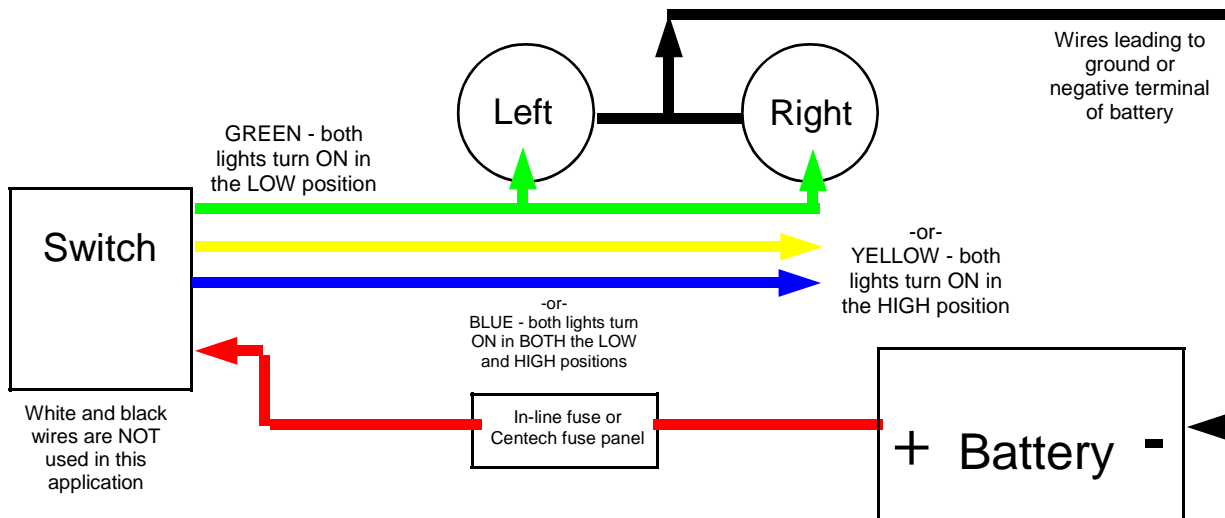
Connect an accessory to the blue wire: that accessory will be ON when the switch is set to either the LOW or HIGH position.

**To enable KILL Switch:** Remove the old kill switch and splice the new switch wires in where the old switch wires had been. If this is a new kill switch circuit, tap the switch's black wire into the power wire running between the CDI and ignition coil. Run switch's white wire to ground, or the negative terminal on battery. If your bike does not need a separate kill switch, the white and black wires are not used.

**Kill Switch used for a horn:** Kill switch can be used for an auxiliary horn. Run 12V power lead and connect to switch's black wire. Connect switch's white wire to the "positive" terminal of the horn. Horns are normally grounded thru the chassis; if the horn has 2 wires then run the other wire to ground or back to the battery negative terminal. Push the kill button and horn circuit will be completed.

**Driving Lights Switched Together:** Running 2 driving lights, with the lights wired so they operate together at the same time.

- Red wire is power coming in from your battery or another "hot" 12 volt source.
- Insert an inline fuse between switch and battery. Fuse must be rated to handle the power draw (amperage) of lights.
- Splice together the two positive wires from the lights.
- Connect those wires to the green, yellow, or blue wire of the switch, depending on the switch position you want to use for "ON".
- Connect the other 2 wires running from the lights to ground or to the negative terminals of the battery.



**Driving Lights Switched Separately:** Running 2 driving lights, with the lights wired so they operate independently.

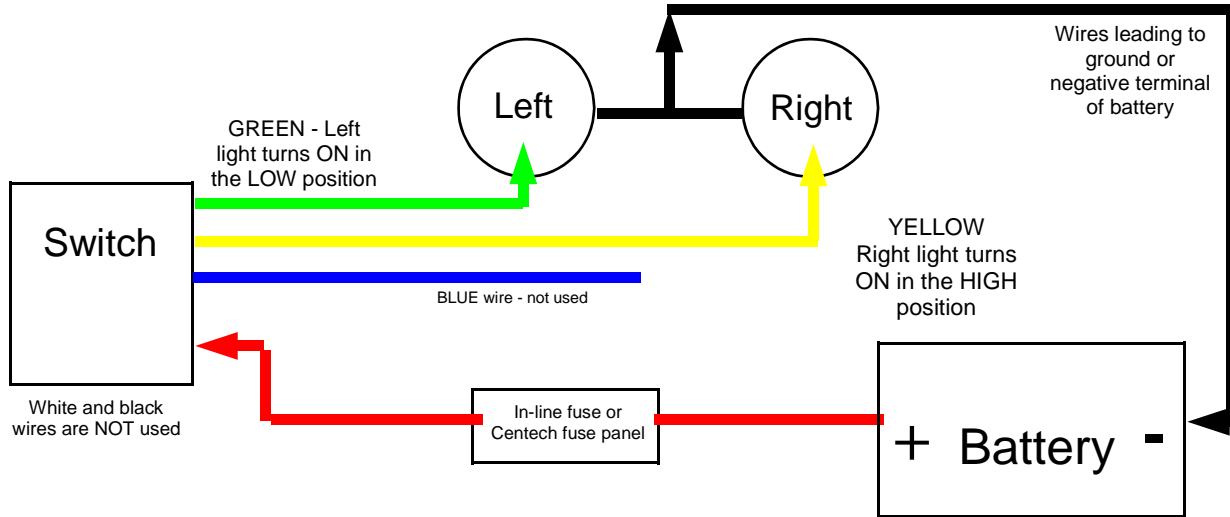
Option 1: Switch can operate one light in the LOW position, and another light operates in the HIGH position, or

Option 2: Switch can operate one light in the LOW position, and both lights operate in the HIGH position, but

Switch cannot operate one light in the LOW position, another light in the HIGH position, and both in a 3rd position.

Option 1: One light operates in the LOW position, and another light operates in the HIGH position:

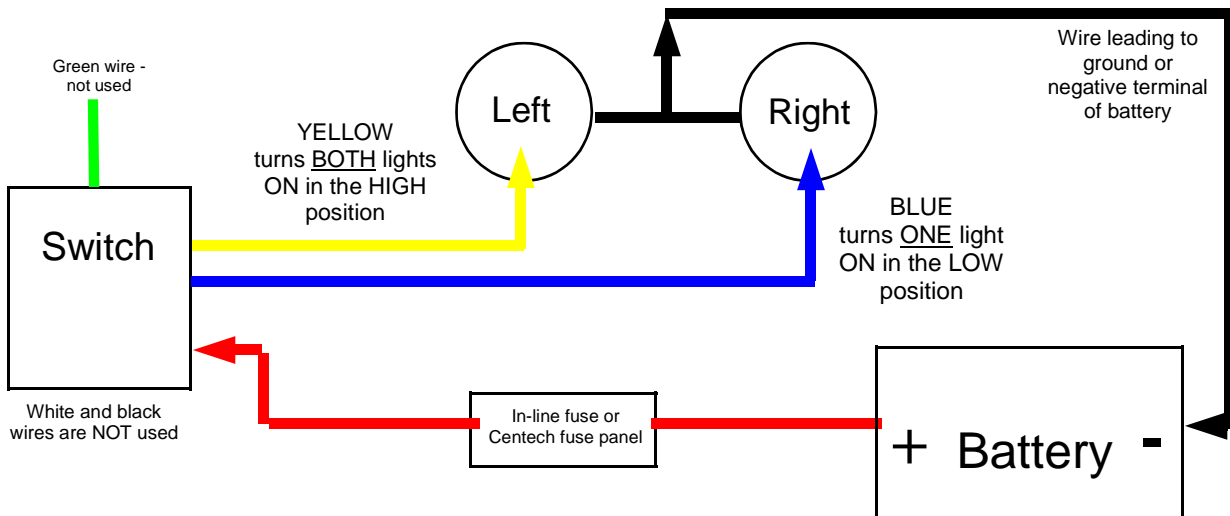
- Red wire is power coming in from your battery or another "hot" 12 volt source.
- Insert an inline fuse between switch and battery. Fuse must be rated to handle the power draw (amperage) of lights.
- Connect a wire (from one light) to the switch position you want to use for that light.
- For instance, to operate one light when the switch is in the LOW position, connect that light's wire to the green switch wire.
- Then connect the other light's wire to the yellow switch wire. It will operate when the switch is in the HIGH position.



- You can swap the green and yellow wires so the right light operates in the LOW position, and the left light operates in the HIGH position

Option 2: One light operates in the LOW position, and both lights operate in the HIGH position:

- Connect the blue wire to one of the lights. That light will turn on when the switch is in the LOW position.
- Connect the yellow wire to the other light. When the switch is in the HIGH position BOTH lights will turn on.
- Connect the other 2 wires running from the lights to ground, or to the negative terminals of the battery.



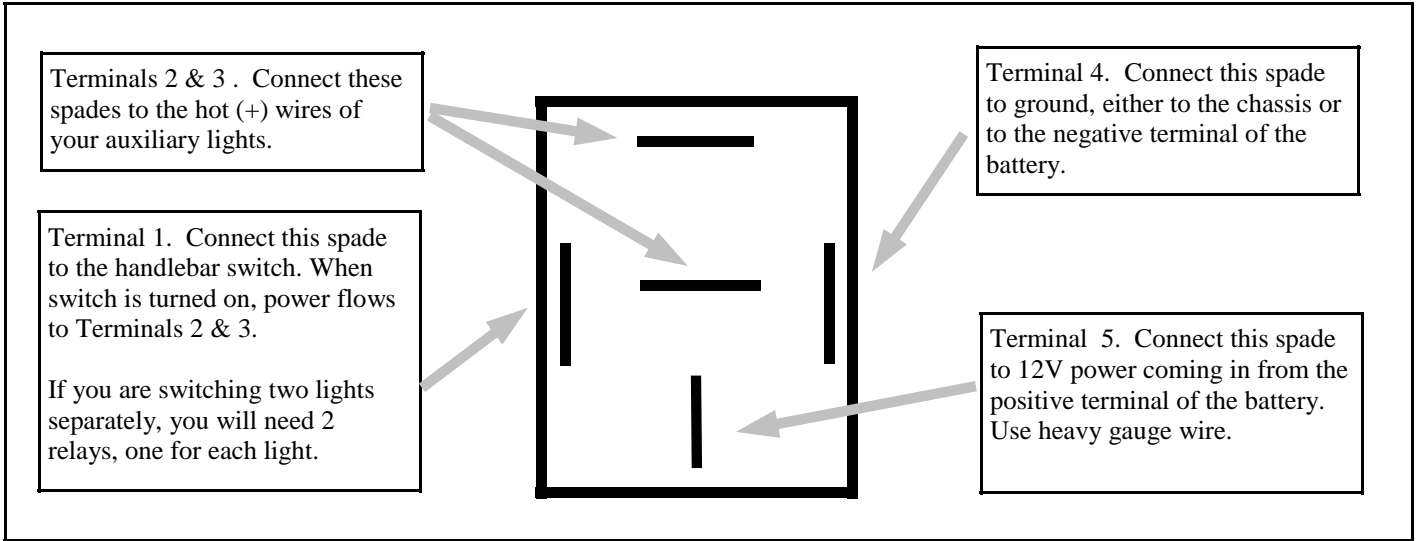
**Special Note:** Most motorcycle wiring harnesses use small gauge wires. Those wires are not usually up to the task of carrying the high amperages necessary to operate auxiliary lights effectively, and the high current flow may damage the wiring harness. (Trail Tech HID lights draw very little current [only 3 amps each] so this warning does not apply.) We recommend running heavy gauge wires (independent) of the stock wiring harness. We also recommend using a separate relay to control the current. The relay acts as a "switching control center", using small amounts of current to regulate large amounts of current. See the next sheet that describes how to wire a relay.

**Using A Relay.** The relay acts as a "switching control center", using a small amount of current that flows through your handlebar switch, to regulate large amounts of current needed for accessories like halogen lighting systems. (Trail Tech HID lights draw very small amounts of current, so a relay is not required. Two TT-HID lights draw about the same current as a low beam headlight bulb.)

But when you're using high current systems and don't use a relay two things can happen: 1.) your accessory won't perform as well as it could, because the current it needs is being restricted by the size (or gauge) of the wires, and 2.) because the wires are too small to handle the current needed by the accessory, the wires in your switch and harness will get hot, and they may fail. It's a good idea to install a relay, even if you think the wires might be able to handle the load. You can purchase a generic relay from any auto parts store for a few dollars.

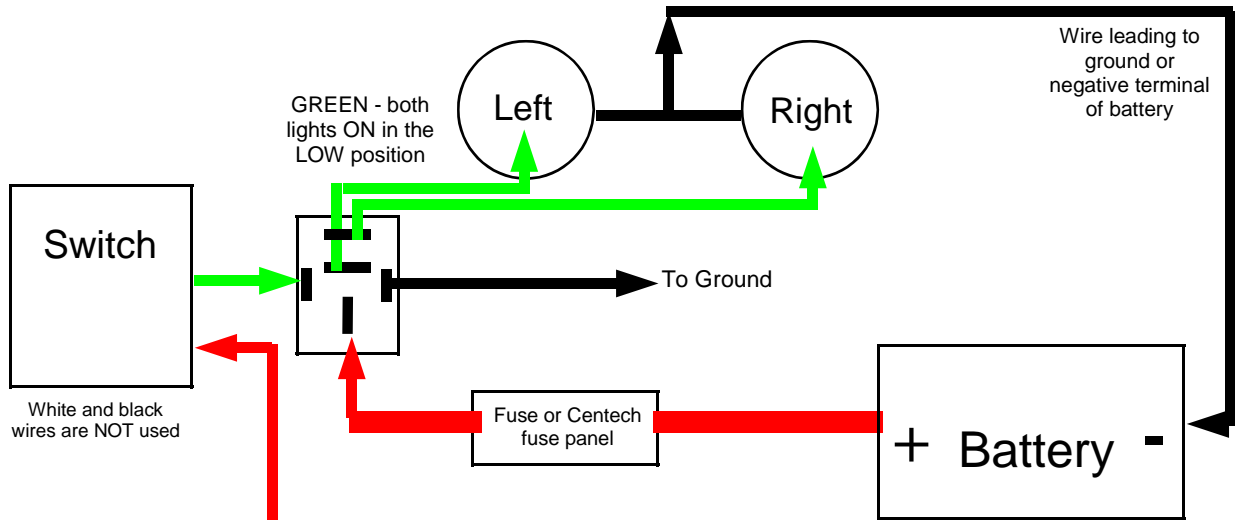
You should also install an in-line fuse at the same time you install the relay. We recommend using Centech Fuse Panels from BestRest.

The back side of the relay will look something like the next drawing. This is a typical layout, but different manufacturers may use another pattern. In any case, they will always provide clear instructions that identify each spade and its specific purpose.



For the next illustration we're using the LOW switch setting, and the GREEN wire from the handlebar switch. When the switch is in the LOW position, both lights will come on. Connect the green wire to Terminal 1. Connect the lights to Terminals 2 and 3.

We designed this circuit so the RED power-in wire going into the handlebar switch is only active when the ignition is turned on.



The RED power-in wire that feeds the handlebar switch was connected to a hot (+) wire that only works when the ignition is turned on. This way, the auxiliary lights can only be activated when the ignition is turned on. When the ignition is turned off, the lights will also turn off, regardless of the position of the handlebar switch.

To enable this ignition switching feature, we tapped into a taillight wire. Do NOT tap into a turn signal wire, or your lights will only work when the turn signal flashes!