

## **Overview-Tips on Electrical Wiring on a Motorcycle**

Wiring an accessory, horn, lights, etc. on a motorcycle can seem intimidating.

There are a few tools, and a few basic principles that will make wiring simple and straight-forward.

### **What is involved in wiring an aftermarket item into your bike:**

1. Determine what signals you are needing for the item. (run, brake, turn, headlight, etc.)
2. Finding those signals on the bike.
3. Connecting to those wires on the bike.
4. Routing those wires on the bike and hiding them.

### **Determining what signals are needed.**

This depends on the product. Most manufacturers will tell you this in their instructions. If it is brake light you will need a wire that has a 12v signal only when the brakes are applied and a ground.

If it is a running light you will need a wire that only has a 12v signal when the key is on and a ground.

All electrical items need a 12v signal and a ground. The ground may be accomplished by a wire or directly bolting the item to the frame. This should be indicated in the manufacturer's instructions.

### **Finding the needed signals on the bike.**

A. The easiest way to find the needed signals on the bike is to go to an item that already uses that signal. Then follow those wires back to the closest connector (plug).

B. Now we need to figure out what wire carries what signal at the plug. This can be done with a test light (See Instructions below on how to use a test light).

C. Unplug the connector which you have already determined carries the needed signal. Then use your test light, on the half of the connector furthest away from the item that uses the signal, to determine which wire inside the connector carries the needed signal.

For example: if you follow from the brake light wires forward and find a connector under the seat, when you unplug the connector the half of the connector you will be testing is the side that is no longer connected to the brake light.

D. When you determine which wire carries the signal you will need to make note of this. This can be done by wire color, masking tape with a note, or orientation inside of connector.

### **Connecting to those wires on the bike.**

A. This can be done in many different ways. The item you are installing may have come with connectors, you may want to use your own connectors, they can be soldered, or we recommend using the Posi style connectors. You can see how to use the Posi connectors in the picture below.

B. Before connecting the unit to the wires on the bike. Be mindful of the routing of the wires. They will need to be in a location that can be discrete as possible and not come into contact with any moving parts or something that may damage the wires.

C. You already determined what signal you are needed for the unit you are installing. You already identified the wires on the bike putting out the signals that you need. Now connect them together using the method you chose in step A directly above.

### **Routing and Hiding the wires on the bike.**

A. Once you have wired the item in and verified that it is wired correctly and works as intended you will want to finish routing the wires and hiding them.

B. Keeping the wires hidden/discreet and in place can be accomplished with zip ties, wiring blocks, etc.

### **Tool usage and references:**

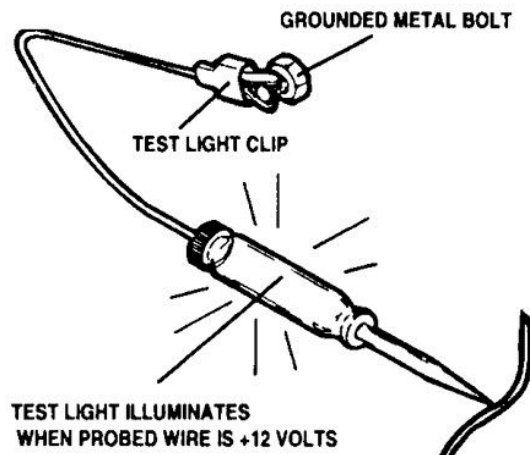
Test Light- Used to find a 12 volt signal.

When using a test light there are two connections needed, 12 volt and ground.

The ground is found by putting the clip at the end of the wire coming out of the handle of a test light on a unpainted or un-powder coated surface of the engine or frame.

Then use the probe to test the wires for a 12 volt signal. When you have found a 12 volt

signal the light will come on.



### Using Posi-Tap Connectors:

When using a Posi-Tap connector, once you have located the signal “hot” or ground, you will **not** need to strip the wire to get a connection. You simply insert the desired wire into the cap with the slot it it, then tighten the main housing down onto the cap.

With the end of the wire stripped, insert the wire from the part being installed into the other cap (with hole in center). Then tighten the cap down to the main Posi-Tap housing. See figure below.

