

RYCA CS-1 ELECTRICAL / WIRING GUIDE

[The CS-1 installation guides should be used as supplements to the videos found on our [Youtube Channel](#). There is no strict order to the build process, but it is highly recommended that you read through all of the [guides](#) and watch all the videos before beginning your project. The Clymer manual for the Suzuki S40/Savage is also a good reference, and can be used in the future for service and maintenance. Another great resource is the [Suzuki Savage forum](#).]

This guide will cover the electrical connections of the CS-1. The electrical video can be found [here](#).

The wires of the sidestand switch connector pictured below must be tied together. Cut the connector off and strip the wires. Twist them together, and then solder and heatshrink:



The style of connectors of the stock tail light may be slightly different from year to year. It's recommended to install female bullet style connectors on the bike to mate with the male bullet connectors of the CS-1 tail light. These connectors can be found at Radio Shack and some hardware stores. They are crimped onto the ends of the bare wires. You can use a crimping tool or pliers, just make sure there is a good mechanical connection between wire and connector. You can then solder the connections and use heat shrink:

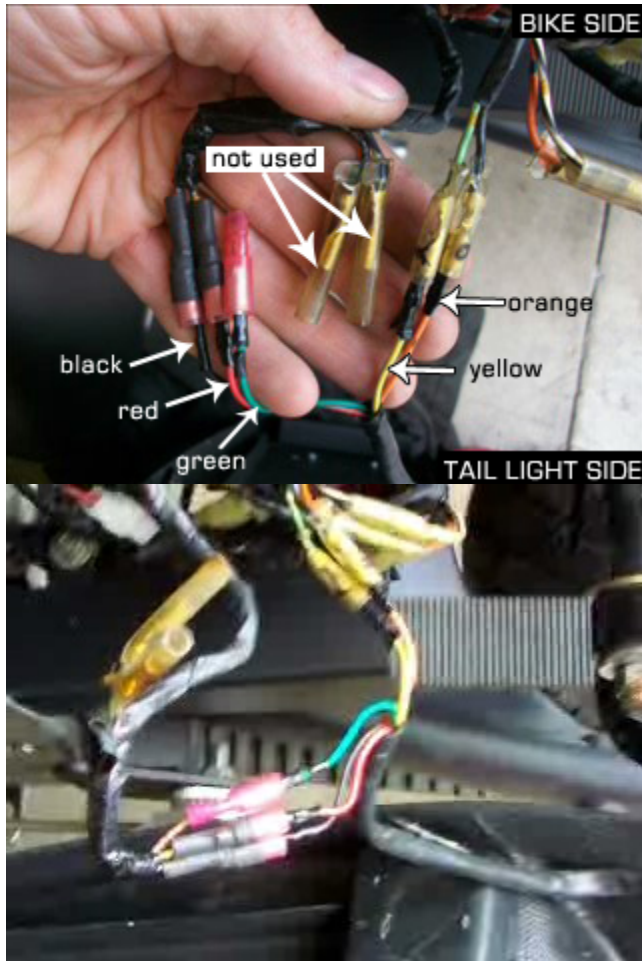


On the bike's wiring harness, locate the wires that were originally connected to the stock tail light and turn signals. You will use the brown, white, and black wires of the stock tail light. You will use the green wire and black wire of the stock turn signals. The two ground wires of the turn signals (black with white stripes) are not used (typically they are grouped with the tail light's

brown, white, and black wires on the wiring harness, see photo below).

The BLACK wire of the stock tail light is connected to the BLACK wire of the LED tail light.
The WHITE wire of the stock tail light is connected to the RED wire of the LED tail light.
The BROWN wire of the stock tail light is connected to the GREEN wire of the LED tail light.
The GREEN wire of the stock turn signals is connected to the YELLOW wire of the LED tail light.

The BLACK wire of the stock turn signals is connected to the ORANGE wire of the LED tail light.



If everything is connected properly, the LED tail light should have a functional running light, brake light, turn signals, and license plate light.

If you are using both the speedometer and tachometer of the kit, the red and black wires of both gauges can be tied together to simplify wiring.

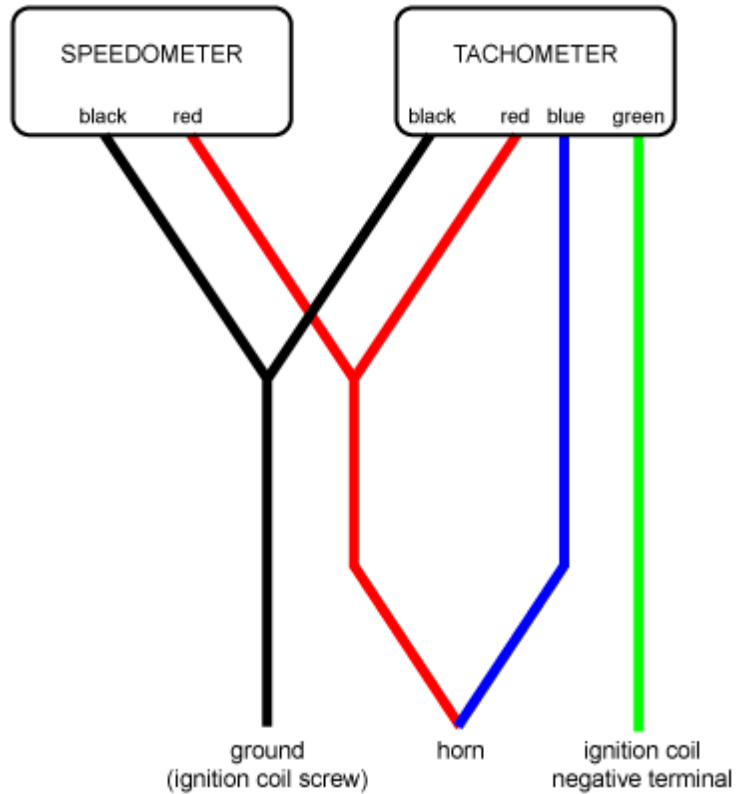
The black wires connect to ground (you can use the screw holding the ignition coil as a ground).

The red wires can be tied to the blue wire of the tachometer and run to the horn circuit. The horn connection wire color will depend on the year model of your bike:

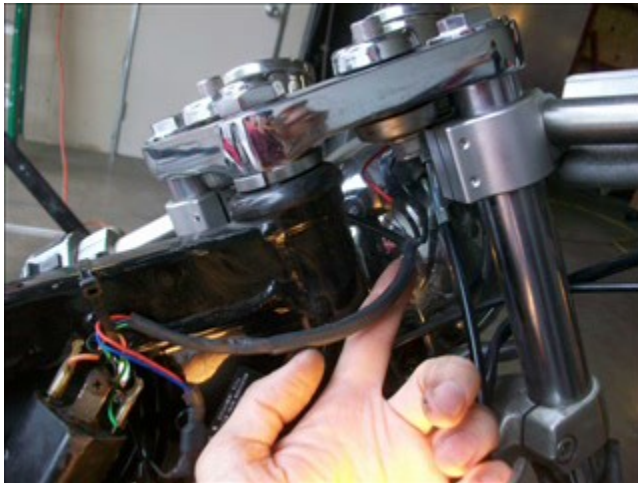
Older models: use the orange wire of the horn (green wire is not used).

Newer models: use the red / black wire of the horn (blue / black is not used).

The green wire of the tachometer connects to the negative terminal of the ignition coil.



Here's a shot of the red and black wires of both gauges tied together with solder and heat shrink:



In the photo below, you see the red wire of the gauges and the blue wire of the tachometer tied together and connected to the horn wire with a female flat style connector. The green wire of the tachometer is connected to the negative terminal of the ignition coil. The black wire of the gauges is grounded to the ignition coil screw:



The connectors of the rectifier can be routed through the hole in the top of the battery box. The velcro strap included in the kit can be used to secure the battery:



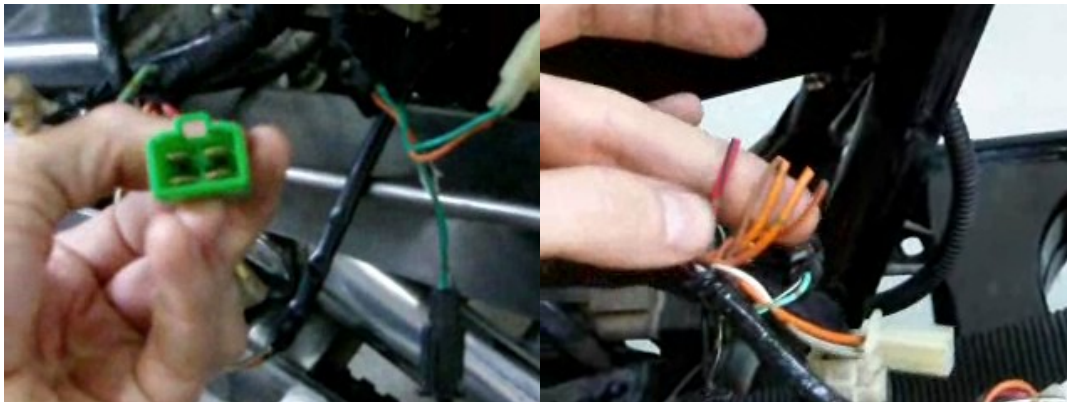
The large relay shown below to the left can be mounted in its original location above the carb. The decompression solenoid connector (right) is not used:

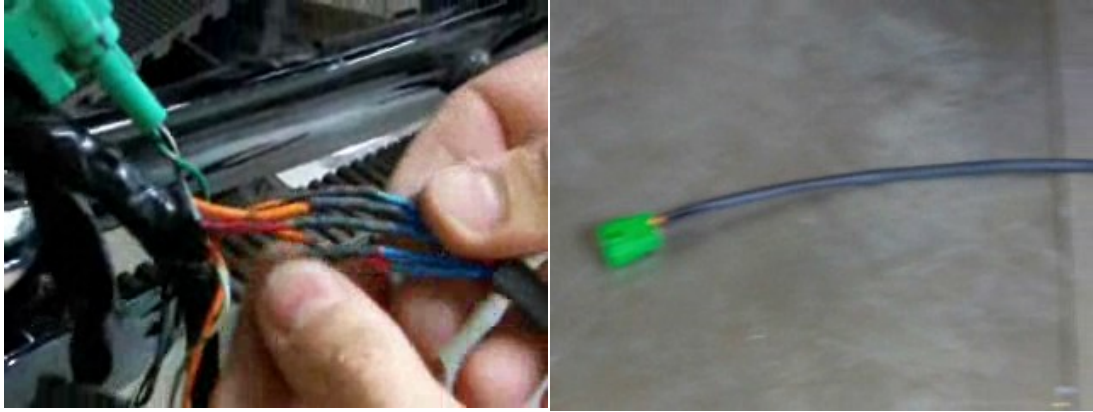


Try to run the wiring harness below the frame rails to avoid clearance issues with the tank. Zip ties are very useful for keeping things organized. (The white connector shown on the left connects to the indicator light assembly of the tank panel):



Extend the keyswitch wiring. Cut the connections to the stock keyswitch and splice in longer sections of wire. The exact length depends on how you choose to run the wiring harness, but approximately 24" should suffice. You can use solder and heat shrink for a clean appearance:





Note: You can extend the wiring on the keyswitch end or the wiring harness end. Just make sure the wires attach to the connector in the same positions. Labeling the wires and taking a few photos is helpful before you make any cuts.