RON FRANCIS Wiring

GW-55
Simplex Ground Wire System

This closed loop grounding system is unique in that it is designed to eliminate the need for the steel frame to return the flow of electricity back to the battery. In order to do this, the brass plate is mounted in the vehicle as a central grounding point for your vehicles electrical devices. Once properly installed, nearly all current will be carried by copper wire and buss bars rather than the steel. Since steel can only conduct 12% to 16% of the electrical capacity of copper, this will greatly improve the voltage to various accessories.

Heavier Black ground leads run from the connection points to the brass plate.

After locating the brass plate, you can proceed with the normal wiring of the car or truck. As you install and wire different components, simply add the respective black ground wire that has been preprinted to identify each circuit. You do not have to use every wire we have supplied but you can never have too many grounds.

Four groups of wires are used. The **Front section** covers the grounds for cooling fan, headlights, parking and turn lights, and horn. The **Interior sections (2 groups)**, Group #1: The radio, gauges, headlight switch, third brake light, steering column and wipers are covered. Group #2: The air conditioning and doors grounds are covered. The **Rear section** covers the grounds for taillights, fuel pump, gas tank, and the license plate light.

IMPORTANT: **Run a negative battery cable (not supplied) directly to the starter mounting bolt. We cannot stress this enough.**

Braided Cable Installation

1. Run the braided strap supplied from a starter mounting bolt to the frame. Either use the 5/16 brass bolt supplied or weld a stud to the frame. If drilling, install the bolt through the frame add the internal tooth lock washer and 5/16 hex nut and tighten securely. You should now have enough thread left on the bolt to install the braided strap, three sections of simplex grounds and the one 10 gauge ground wire that feeds the back section. These do not HAVE to be all connected to the same bolt in the frame instead, they can be put on one of the other engine mounting bolts if desired but the steel connection between each section does reduce the continuity / voltage slightly.

Wire Routing

2. Connect the **Front section** ring terminals to the 5/16 bolt and run the wires to the individual devices printed on the wires.
3. The **Interior sections** should be run from the inside to the outside of the body through one hole and then to the frame mounted bolt. Connect one or two of the heavier gauge wires in this section to the brass plate. The plate then can be used as additional grounding points for other interior accessories. Keep all wires in one thru hole for simplicity of rerouting or maintenance later.
4. The **Rear section** 10 gauge ground wire coming from the front at the 5/16 frame mounted bolt is fed to the rear of the vehicle where it is joined to the rear Simplex ground wires.
5. The purpose of using these wires is to make as much of the electricity flow through the copper wires and use as little steel or cast iron as possible as they can only conduct 12-16% or what the copper can. This is quite a reduction and can definitely affect the voltage to each accessory

Why we do it

While most ground requirements are obvious, many vehicle owners don't realize that if the headlight switch is not grounded the interior light portion of the switch will not work. The steering column needs a ground for the horn button to work. Ron Francis' **WIRES WORK**