Ron Francis Wiring
6 Volt Universal Retro Wiring System

QUICK VIEW Instructions

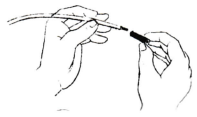
FUSE BLOCK

FUSE BLOCK, HORN & FLASHER MOUNTING: The fuse block and the flasher and horn relay should be mounted together under the dash board on the driver's side. Choose a location that is "ACCESSIBLE"
BE CAREFUL NOT TO PINCH ANY WIRES UNDERNEATH THE MOUNTING LEGS WHEN TIGHTENING

READ THE PRINTING ON THE WIRE "BEFORE" PLUGGING "ANY" WIRES INTO THE SHORT WIRE LEADS RUNNING FROM THE FUSE BLOCK.

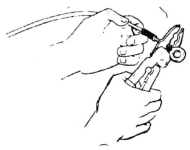
Locate the large gauge RED BATTERY FEED wire running from the fuse block. Connect it to the "-" NEGATIVE post on the ammeter. This wire is hot all the time. **Note: This is an important connection be sure to crimp on the terminal correctly.**

Sleeve & ring terminal installation procedure



(1) Cut the wire to the correct length, strip the insulation 1/4 inch from the end of the wire. Slide the rubber sleeve onto the wire and move it back out of the way

(2) Slide the large terminal onto the bare end of the wire and hold for crimping



(3) Crimp with the proper tool as shown. Make this important connection tight as possible. Soldering is recommended.

(4) Pull the rubber sleeve back over the crimped area of the ring terminal to finish the job

IMPORTANT: Installing the sleeve and ring terminal is an important connection. We strongly recommend soldering this connection.

IGNITION SWITCH

This bag contains wiring for the ignition switch and clutch or neutral safety switch. We have supplied ring terminals to address stud type ignition switch connections, individual female spade terminals and the connector for our IS-04 dash ignition switch. Below are the wire colors that connect to the switch with a description of it's use. Most ignition switches are marked with symbols/letters making the connection very easy.

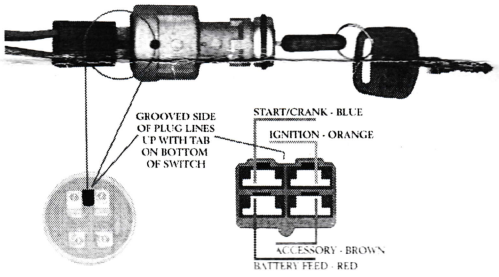
RED **IGN SW->SOL ("B", BATT):** This wire connects to the ignition switch and runs to the "-" NEGATIVE post on the ammeter. This wire is "hot" all the time.

ORANGE **FUSE BOX ->IGN ("I", IGN):** This wire is connected to the fuse block and runs to the ignition terminal on the ignition switch. This wire is hot with the key in the run & crank positions.

BROWN **FUSE BOX-> ACC ("A", ACC):** This wire is connected to the fuse block and runs to the accessory terminal on the ignition switch. This wire is hot with the key in the run & accessory positions.

LT BLUE **IGN SW->SOL ("S", SOL):** This wire connects to the ignition switch and runs to the clutch or neutral safety switch, then to the "S" post on the starter solenoid. This wire engages the starter and will only be hot with the key in the crank position.

Ron Francis SYNERGY SWITCH CONNECTIONS
Pt numbers IS-04, IS-09, etc.....



Note: Connector view (REAR) wire side

Connect the RED wire IGN SW->SOL to the BATT terminal on the ignition switch and run the other end to the "-" negative post on the ammeter. The LT BLUE wire IGN SW->SOL connects to the "S" stud on the ignition switch then run this wire to the neutral safety switch. Cut the wire to length and connect it to one of the terminals, then the remainder runs from the neutral safety to the starter solenoid as shown above.

BATTERY ACC, IGNITION ACC & ACCESSORY FEED:

The fuse block has accessory circuits that can be used to power any accessories you maybe adding. These are short leads running out from the fuse block.

RED BATTERY ACC wire is hot all the time.
ORANGE IGNITION ACC wire is hot with the key on.
BROWN ACCESSORY FEED wire is hot when the key is in the run and accessory position.
PINK RADIO hot lead wire for the radio.
PURPLE WIPER hot lead wire for the wiper.
BROWN HEATER -power feed to your heater switch.
TAN ELECT FUEL PUMP runs to the pump.
TAN ELECTRIC CHOKE runs to the choke.

The remainder of the wire lead connections running from the fuse block will be addressed later in the instructions.

FUSE BLOCK LAYOUT TOP VIEW

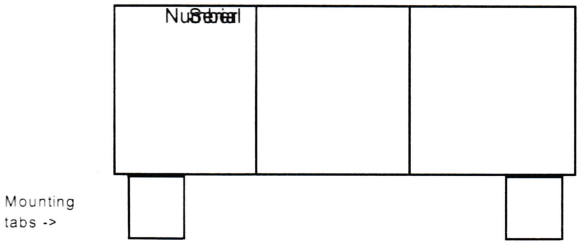
Fuse Description	Fed By	Fuse Description	Fed By	Fuse Description	Fed By
BATTERY ACC	"B"	BRAKE HAZARD	"B"	GAUGES	"A"
ELECTRIC CHOKE	"I"	TAIL LIGHT	"B"	RADIO	"A"
HEATER	"I"	FUEL PUMP	"I"	WIPER	"A"
IGNITION ACC	"I"	TURN FLASHER	"I"	ACCESSORY SPARE	"A"

"B"=Battery, "I"=Ignition, "A"=Accessory

FUSE ORIENTATION:

Each Ron Francis wire harness is shipped with a serial number attached to the fuse block. Supplying this number to us when calling our tech line tells us what harness you purchased, enabling us to trouble shoot your problem intelligently. Looking directly at the serial number on the side of the fuse block positions the fuse block as shown in the chart. **This number also orients the fuse panel for viewing the fuse positions correctly.**

Side view of fuse block



GENERATOR

Hopefully you realize that a generator will have great difficulty in keeping a battery charged in today's traffic situations. We highly recommend that you consider an alternator now. With that aside, read on. **To insure accurate hookups, use a factory diagram to make connections.** This is general hookup and your exact wiring for this component may be different.

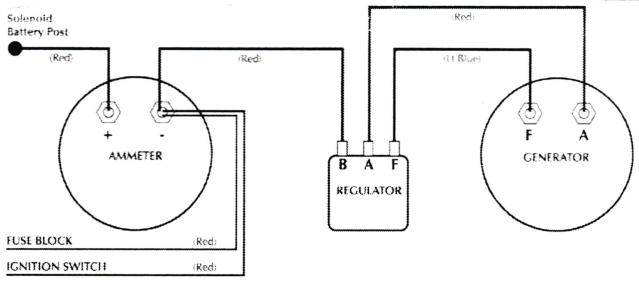
Mount the regulator within the distance of the wires supplied that run from the generator to the regulator. The large **RED** wire marked (GENERATOR-> REG) is for the heavy armature lead between them.

The **LT BLUE** wire marked (GENERATOR-> REG) is the field connection between the generator and regulator.

The main **RED** wire (REG BATT->SOL) connects to the battery cable post on the starter solenoid using the sleeve and ring terminal provided. Run the other end to the "+" positive post on the ammeter. **NOTE: This is an important connection, the proper crimp tool is required.**

NOTE: The short **BROWN** wire labeled ALT FEED running from the fuse panel "is not" used in this application.

After the car is running, polarize the generator according factory requirements for your specific system.



DISTRIBUTORS

Points type distributors There is an **ORANGE** (COIL FEED) wire running from the fuse box that must be connected to the positive side of the coil. This wire supplies keyed ignition power to the coil.

DASH GAUGE & SENDING UNITS:

The **BROWN** wire GAUGE FEED is connected to the fuse

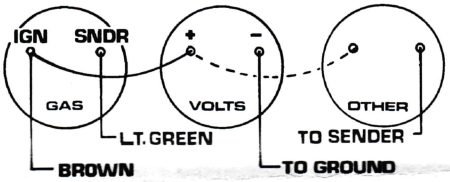
block and run to the gas gauge. From there, connect the BROWN wire to "ALL" of the gauges "+" terminals in a loop as in the drawing shown below.

LT GREEN GAS SENDER wire runs from the "sender" terminal on the gas gauge to the fuel tank sending unit. The tank sending unit also requires a good ground.

PURPLE COIL->TACH wire runs from the "-" side of the coil and run it to the "S" (sender terminal) on the tach. Since HEI distributors are most commonly used, we have installed the GM internal coil HEI connector on this wire. Remove it for points & aftermarket type applications.

GRAY OIL PRESSURE &
DK BLUE WATER TEMPERATURE are run from the gauge to the "matched" sending units. The sender on the engine must not have any type of sealer on the threads as this will not allow it to ground to the block

BLACK GAUGE GROUND wire has been supplied to ground all the gauges. Connect it to "ALL" the ground connections on the gauges and connect the wire to a good ground. All gauges require the same wires but some are marked differently as to which is the ignition and the sender connections. Your questions here are best answered by the instructions provided with the gauges.



Wiring for the **dash lights** will be addressed later on in the installation instructions. These lights will also require grounding and can be connected to the gauge ground wires.

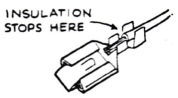
BRAKE LIGHT SWITCH

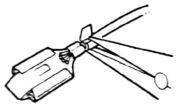
The ORANGE BRK SW FEED supplies power to the brake light switch and is already connected to the fuse block. Uncoil this wire and run it to one of the terminals on the brake light switch.It does not matter which one. If you have a stud type brake switch connection, we have supplied ring terminals for this type switch. Remove the installed connector(s) and crimp on the ring terminal using the proper crimp tool. Locate the PURPLE T SW-> BRK LT SW running from the turn signal switch connector and connect it to the other terminal on the brake switch. **"IF"** you have a third brake light, splice the PURPLE THIRD BRK LT wire into this wire and run it to the 3rd brake light. 3rd brake lights must be grounded.

THE BRAKE LIGHTS WILL NOT WORK UNTIL THE COMPLETE TURN SIGNAL SWITCH WITH 6 OR MORE WIRES IS PROPERLY CONNECTED

TURN SIGNAL SWITCH

We have supplied the wires and our part # QCK-8 connector for the switch harness connection which will work for "all" applications. If you have not already done so, remove the connector on your turn signal harness. Install the supplied terminals on the turn signal wires as shown in the drawings below. **We recommend soldering these connections.**





6 VOLT TURN SIGNAL FLASHER CONNECTION

The installation of 6 volt flasher(s) **(NOT SUPPLIED)** is required to allow the turn signal system and 4-way flasher to operate. A PINK and GRAY running from the fuse block, have been supplied to wire to the flasher(s). The GRAY wire printed TURN FLASHER connects to the power feed/input to the turn signal flasher. This is a keyed ignition hot wire. The PINK wire printed HAZARD FLASHER is used if installing a 4-way flasher switch. This wire is a **"battery hot all the time"** wire.

The input/load connection to the flasher(s) is completed after making the connection to the turn and 4-way (if used) switches following the information listed later in the instructions. Any 6 volt flasher can be used with this system. The following are just two part number listings, Echlin 535 or Signal Stat 172.

6 VOLT HORN RELAY CONNECTION

The installation of this relay (NOT SUPPLIED) is required to allow the horn to operate. A RED wire printed RELAY FEED connects to the battery connection point on the 6 volt relay. Coiled separate in the kit is DK GREEN printed HORN. Connect this wire to the output or horn terminal on the relay and run the other end to the horn(s). The horn also requires a good ground. Running from the turn signal switch connector is a BROWN HORN RELAY wire. Depending on the button location will determine where or how this wire is connected. This wire requires grounding when the button is depressed, which closes the relay, blowing the horn. Any 6 volt horn relay can be used with this system. The following is just one part number that can be used, Borg Warner R102.

TURN SIGNAL CONNECTION

Below is a chart listing our color turn signal wires and a small definition. If you do not know the definition of the wires running from your switch please call 610-485-1981. We will do our best to help you through the connection process. Plug the wires into the QCK-8 connector so that when plugged into the column the correct wire colors will be across from each other in the plug.

Our Wire Colors	Description
Blue	Right Front Turn
White	Right Rear Turn
Yellow	Left Rear Turn
Green	Left Front Turn
Purple from brake Lt Sw	Brake Switch Input
Brown	Horn Switch
Gray	Turn Flasher input/load
Pink	4 Way Flasher Input/load (Not used on most applications)

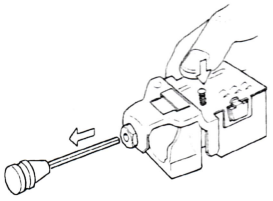
After the turn signal switch connections are complete, run these wires directly to each corner of the vehicle. Connect the wires to the "bright" filament wire running from each bulb. Be sure to solder all connections and make sure all bulb sockets have a good ground.

DK GREEN to the left front
LT BLUE to the right front
YELLOW to the left rear
WHITE to the right rear

The shorter DK GREEN (LFT DASH IND LT) & LT BLUE (RT DASH IND LT) are for turn signal indicators. Run both wires to the dash board mounted indicator lights and make the connection. The lights require a good ground.

HEAD LIGHT SWITCH

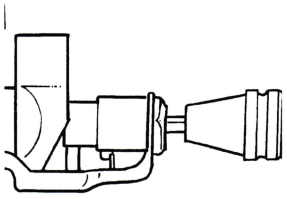
REMOVING THE KNOB AND SHAFT



Pull the knob out to the "head light" position. Now push the spring loaded button on the bottom of the switch (as shown in the drawing to the right) (opposite side of switch from the big black plug) and gently push the knob in slightly and then pull straight out. After mounting the switch and tightening the nut with care, push the shaft straight in to install.

NOTE: This headlight switch is not a factory switch and therefore may not fit directly into your stock location. We cannot modify the switch to mount in your dash.

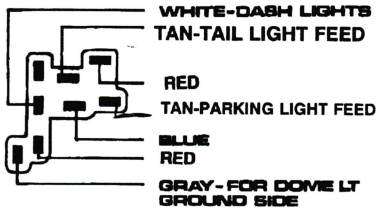
INSTALLING THE SHAFT AND KNOB



If the head light shaft will not "re-lock" in the switch after removal, the shaft is entering the switch base at a angle. Carefully bend the mounting nut area so it will allow the shaft to enter the body of the switch straight.

If the shaft is at any angle, it will not lock into the switch body.

HEAD LIGHT SWITCH CONNECTOR



Uncoil the wires running from the switch connector and plug it into the switch. The two RED wires labeled HDLT SW FD 1 & HDLT SW FD 2 are run to the fuse block. Plug them into the short RED leads running from the fuse block making sure the printing on the wires **"MATCH"** when plugged together.

Following the wording on the wires, run the TAN marked PARK LIGHT FEED to the left and right front park lights and the TAN TAIL LIGHT FEED to the left rear tail lights. Connect these wires to the "DIM" filament wire running from each light.
Remember to ground all the light sockets.

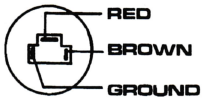
LICENSE PLATE LIGHTING Use some of the remaining TAN wire from a taillight to connect to the license plate light itself. This light must be grounded.

DIMMER SWITCH A connector has been installed on the dimmer switch harness to plug into a floor or GM column mounted dimmer switch. Use the floor dimmer switch part numbers NAPA
DS-115 and Ron Francis Wiring DS-02. If your switch connector differs from the one supplied, remove the connector and install individual connectors on each wire.

HEADLIGHTS

Running from the dimmer switch connector are two RED & two BROWN HEAD LIGHT wires. Run a RED & BROWN wire to "EACH" head light. If you are using sealed beams (two connectors included), the drawing below shows the correct wire position in the sealed beam connector for our color wires. Also provided are two BLACK wires HEAD LIGHT GRND for use grounding each head light. The head light switch is designed for a fifteen amp load.

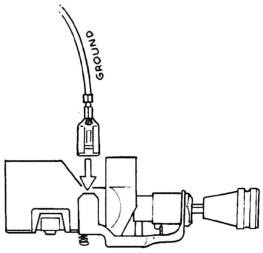
Sealed beam Headlight Connection (View from rear of plug)



A sealed beam socket kit and special wiring kits are available in our catalog. (SB-20). This is a great product to terminate your headlight wiring on the fender well as many original wiring systems had.

HIGH BEAM INDICATOR LIGHT can now be connected. This wire was supplied and splices into the **BROWN** high beam wire at the dimmer switch connector and runs to the indicator light in the dash. The light also requires a good ground.

HEAD LIGHT SWITCH GROUND The **BLACK** wire is for grounding the head light switch and plugs onto the metal base of the switch as shown in the drawing to the right and runs to a good ground. The head light switch must be grounded for the interior light circuit to function properly.



INTERIOR/COURTESY LIGHTS: The **GRAY** wire shown in the head light switch drawing is for interior lights. This wire controls your dome light by turning the knob full counter clockwise. This **IS NOT** a **HOT** wire but controls the **GROUND SIDE** of the light. Run a wire from a fused hot source to one wire running from each courtesy light. Connect a wire from head light switch connector to the other wire running from each courtesy light. **NOTE**: You must ground the head light switch as shown in the drawing to the above.

DASH LIGHTS The **WHITE** wire running from the head light switch connector is run to the dash lights where the brightness is controlled by the turn of the knob. This wire connects to "ALL" the positive dash light wires. The dash light sockets require a ground and can be connected to the ground stud on the back of each gauge.