

Wiring Connections

Black Wire - (- Ground Input): The Black wire's function is to supply - Ground, which completes the circuitry and allows the security system to operate.

CONNECTION: Using the correct sized crimp-on ring terminal, connect the Black wire to the metal frame of the vehicle, preferably using an existing machine-threaded fastener. Make sure that the ring terminal attached to the Black wire has contact with bright, clean metal. If necessary, scrape any paint, rust or grease away from the connection point until the metal is bright and clean. If the control module has an insufficient ground connection, the security system can find partial ground through the wires that are connected to other circuits, but the alarm will not function correctly, giving the impression of a defective control module. The system can partially work, so a bad ground wire connection would be suspected. In some cases the alarm could arm and disarm properly -but not function correctly otherwise.

The Black wire attached to the control module is the antenna wire. Do not connect this wire to anything or the transmitter's range will be reduced or eliminated. Stretch the Black antenna wire out and as high as possible for the best operating range.

Red Wire - (+12 Volts Input): The Red wire's function is to supply Constant +12 Volts to the security system. When +12 Volts is first applied to the Red wire,

the system will revert to the state it was in previously. The Red wire also supplies +12 Volts to the built-in relay for flashing the parking lights.

CONNECTION: Connect the Red wire to a source which has +12 Volts at all times. Ensure that this source +12 Volts which is stable in all ignition key positions. Connection locations can be at the supply wire at the ignition switch, the supply wire *behind* the fuse block or the fuse/junction block. *Never* just insert the Red wire or any other security system wire behind a fuse. Also, please note that connecting directly to the battery's Positive terminal will expose this connection to failure due to a corrosive environment. The source connection must have at least a 15 Amp capacity at all times.

Yellow Wire - (+12 Volts Ignition Input): The Yellow wire is an ignition "on" input to the security system. This connection is critical to the proper operation of many of the security system's operations.

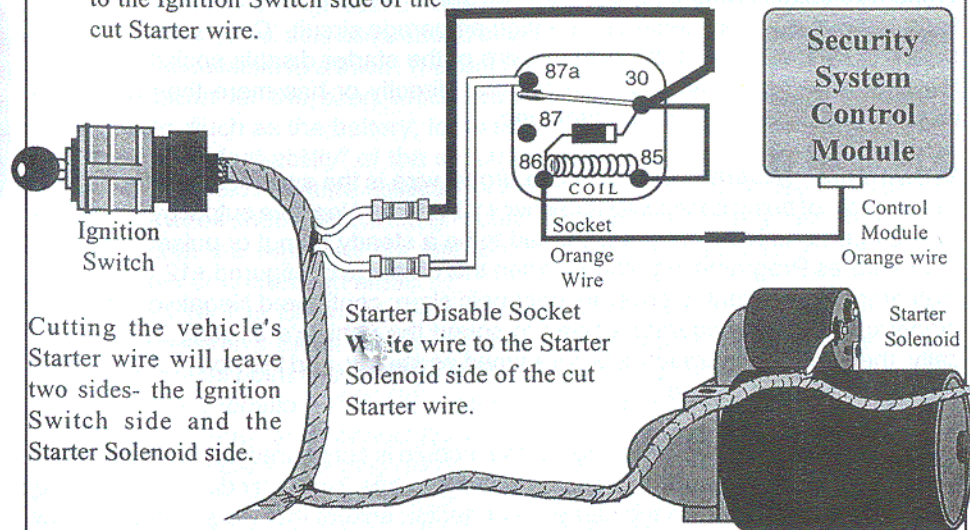
CONNECTION: This wire supplies +12 Volts to the control module whenever the ignition switch is "on". This connection should be made at the ignition switch harness, to the primary ignition circuit. Primary ignition has 0 Volts when the ignition key is in the "Lock", "Off" and "Accessory" positions; and +12 Volts in the "Run" and "Start" positions. Locate the correct wire at the ignition switch harness and securely splice the Yellow wire to it. This connection is critical to the proper operation of "Enhanced 3rd Channel Operation".

Orange Wire - (Negative Output For Optional Starter Interrupt): The Orange wire is for a starter disable socket and relay. The function of this wire is to provide a 500mA - Ground Output whenever the security system is in an armed state. This output supplies - Ground to one side of the relay's coil. The other side of the relay coil will be supplied with +12 Volts from the ignition switch, but only if the ignition switch is turned to the "start" position. If this occurs, the coil will energize, activating the relay, which in turn will open the starter circuit. The starter interrupt prevents the vehicle from starting only if the alarm is armed (including while the alarm is activated), and will draw current from the vehicle's electrical system only if an attempt is made to start the vehicle.

CONNECTION: To interrupt the vehicle's starter circuit, the starter wire must be located and cut. It is recommended that this connection be done as close to the ignition switch as possible. Use a voltmeter, not a test light, to find the correct wire, which is the wire from the ignition switch to the starter solenoid. **CAUTION!** Avoid the airbag circuit! Improper use of a test light can cause deployment of the airbag, which may result in bodily injury! Test lights can also damage on-board computers and associated sensors.

The starter wire will read +12 Volts only when ignition key is in "start" position (cranking the engine). Cut this wire at a suitable location. Confirm that this is the correct wire by turning the ignition switch to the "start" position. The starter should not engage.

Starter Disable Socket **Red** wire to the Ignition Switch side of the cut Starter wire.



Cutting the vehicle's Starter wire will leave two sides- the Ignition Switch side and the Starter Solenoid side.

Starter Disable Socket **White** wire to the Starter Solenoid side of the cut Starter wire.

Configuring a Starter Disable using the Socket & Relay.

Connect the starter disable socket's Red wire to the ignition switch side, and its White wire to the starter solenoid side. Be sure that good, solid electrical connections are made as this generally is a high amperage circuit. Connect the security system's Orange wire to the Orange wire of the starter disable socket. **Note:** If the Orange wire touches 12 volts positive directly or has more than a 500mA ground load, the circuit will be damaged.

Brown Wire - (Audible Output): The Brown wire is the system's audible output. It is capable of being configured for either +12 Volts or Negative output by a standup and jumper, and it can be programmed to be a steady output or pulsed output in the Features Programming Mode. When this output is configured +12 Volts it is a high amperage output to drive an electronic siren; configured Negative it is a low amperage output to operate a relay to sound the vehicle's existing horn. Typically, the siren configuration is programmed as steady, and the horn configuration is programmed as pulsed.

Using The Siren: Confirm that the control module is configured for its "as shipped" configuration of +12 Volts. The control module has 3-pin standup with shorting jumper next to the main wiring harness connector; ensure that the attached jumper is installed on the right two pins, in the "S"-marked position. This standup and jumper are shown in the Wiring Diagram Overview on pages 26-27.

Mounting The Siren: Find a location in the engine compartment away from the extreme heat of the engine and manifold. A suitable location will offer a firm mounting surface, will also allow sound dispersion out of the engine compartment, and not be accessible to a thief. The last point is most important; it is advisable to seek a location for the siren which requires removal of engine compartment components, such as the battery, for example, to access the siren. This greatly reduces the "defeat-ability" of the security system. The siren must be pointed downward to avoid moisture collecting inside it and to enhance sound dispersal. The siren's wires should be carefully routed so as to be not easily detectable, and to ensure that the wires will not interfere with any moving parts in the engine compartment or underdash areas.

CONNECTION: The Brown wire must be connected directly to the siren's Red wire, and the siren's Black wire is connected to - Ground, which may be to any clean, bare metal point of the vehicle's chassis. The use of an existing grounding point is a good location. Do not configure the control module's 3-pin standup jumper for "(-) Horn" and connect the Brown wire to the siren's Black wire.

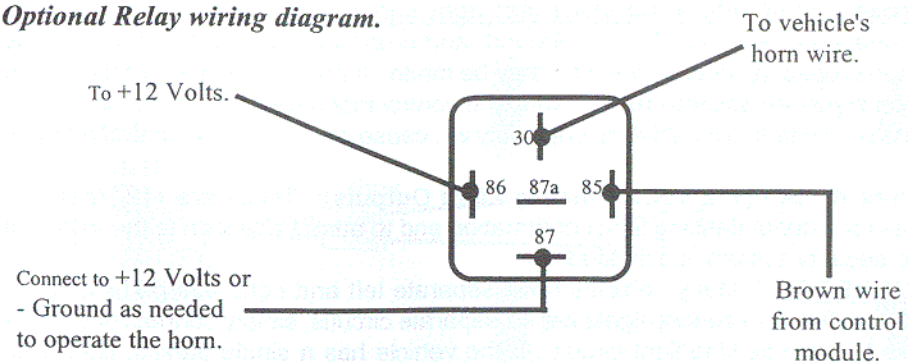
Using The Vehicle's Existing Horn: This will require that the control module be configured for "(-) Horn" and that programmable feature #7 be changed from "Steady Siren" to "Pulsed Horn. To change the Brown wire's polarity from the "as shipped" configuration of +12 Volts, locate the shorting jumper next to the main wiring harness marked "H/S". Remove this jumper, and reinstall it on the two left

pins of the 3-pin standup; this is the "H"-marked side of the standup. The standup and jumper are shown in the Wiring Diagram Overview on pages 26-27. Upon completion of all wiring connections, consult the Operator's Guide section of this manual and program feature #7 for the "Pulsed Horn" audible output setting.

CONNECTION: The Brown wire may be connected directly to the vehicle's horn switch wire, provided the circuit operates with .25 Amp of current or less. First, ensure that the vehicle's horn operates with the ignition switch "off"; if not, an optional relay and the "direct to horn" method is needed. If the horn sounds when the ignition is "off", the next step is to locate the vehicle's horn switch wire to determine the presence of an existing horn relay. **CAUTION! Avoid the airbag circuit!** The target wire is typically found around the steering column; the correct wire will show +12 Volts normally, and no voltage when the horn is being sounded. Once the vehicle's horn wire is identified, the electrical switching load must be determined.

The most direct method is to cut the wire and measure the switching load with a digital multimeter (DMM). Connect the meter's Black lead to the cut wire from the switch, and its Red lead to the cut wire to the horn. Set the meter to its highest scale first, then press the horn switch to obtain the switching load reading. If the results are a switching load of .25 Amp (250 milliamperes, or mA), then the control module's Brown wire may be connected directly to the vehicle's horn switch wire. Other alternative testing methods include disconnecting the horns, then operate

Optional Relay wiring diagram.



the horn switch. Typically, a "clicking" sound from the vehicle can be heard as the horn button is pressed, and released, which confirms the presence of an existing horn relay. Yet another alternative is to consult a wiring schematic of the vehicle in question to determine if an existing horn relay is present. The least desirable testing method is the use of a standard +12 Volt test light. **CAUTION! Avoid the airbag circuit! This is one of the few uses left for a standard test light in a modern vehicle; use a digital multimeter (DMM) to identify the horn wire first. Probing an**

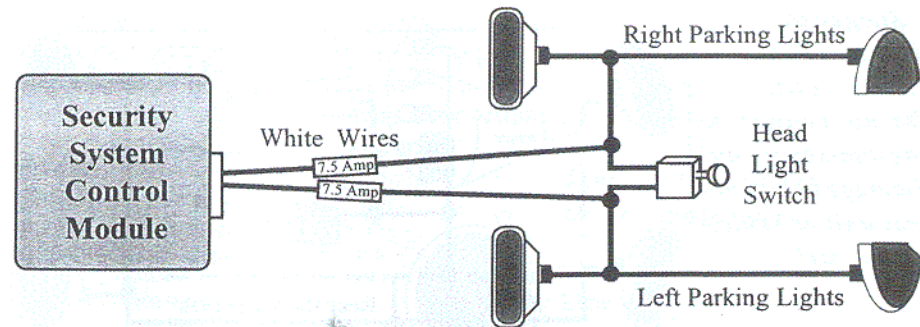
airbag circuit with a standard test light can cause the Airbag to deploy!

Connect the test light clip to - Ground, and probe the wire. If the horn sounds when probed, a direct connection may be made. If not, use the following diagram to configure an optional relay. When the control module is configured for (-) Horn output, exceeding its .25 Amp capability will cause damage to the control module.

White Wires - (+12 Volts Flashing Light Outputs): These are +12 Volts outputs for exterior flashing light confirmation and to attract attention to the vehicle if the security system is activated.

CONNECTION: Many vehicles have separate left and right side parking lights. When left & right parking lights are on separate circuits, simply connect one White wire to each parking light circuit. If the vehicle has a single parking light wire, connect both of these wires to the vehicle's parking light circuit. The parking light wire or wires can usually be found at the following locations: at the headlight switch, at the fuse/junction block, or in the rear body harness in the driver kick panel. The correct wire or wires will typically show +12 Volts when the headlight switch is in the "Parking Light" and "Head Light" positions (sometimes - Ground is found). When such a wire or wires are located, be sure to also test that it is non-rheostated: while metering the wire, operate the dash light dimmer control. The correct wire will show no change in voltage when the dimmer is operated. Do not attempt to flash the parking lights by connecting the White wire to a rheostated (dimmer) circuit! This

Connecting directly to Left & Right Parking Lights.



will backfeed the parking lights through the rheostat or illumination control module, and cause damage to the vehicle or the system's control module. Also, if the White wire is shorted, the system's control module will be damaged. Some vehicles have a parking light relay which is triggered by a - Ground circuit wire from the headlight switch. When installing the system in these cars, connect the White wires to the vehicle's switch wire and simply connect the system's Red/White wire to - Ground. Flashing the headlights is not recommended- halogen headlights are not designed to be rapidly turned on and off.