Total System Reset

The 30 features, including the Selectable Coded Override, may be easily returned to the default settings. To perform this Total System Reset, follow these steps:

Step 1 - Locate the small round hole in the lower control module case. Two solder dots will be visible beneath this hole.

Step 2 - Short the two solder dots together (a slotted jeweler's screwdriver works well).

Step 3 - Momentarily shorting the solder dots together will result in the siren or horn sounding once. The Selectable Coded Override is now reset to 1 & 0 presses.

Step 4 - Continue to short the solder dots until the siren or horn sounds twice. All of the programmable features are now returned to the factory-set default positions.

"Protect Yourself And Your Investment"

INSTALLATION INSTRUCTIONS

MODEL: C-4SRS

Step 2a - Factory-set Selectable Code Override of one and no presses of the valet switch: press the valet switch equal to the Selectable Code Override number for stage #1 (the factory setting is one press). The system will respond by briefly sounding the siren and then two chirps, in which case proceed to Step 4.

Step 2b - Customized Selectable Code Override: press the valet switch equal to the Selectable Code Override number for stage #1. The system will respond by briefly sounding the siren and then one chirp. You now have 8.5 seconds to initiate Step 3.

Step 3 - Momentarily press the valet switch equal to the Selectable Code Override number programmed for stage #2. The system will acknowledge the entry by sounding the siren and then two chirps.

Step 4 - Now press the LOCK button on each transmitter to programmed. The system will respond to each with a brief sounding of the siren and a chirp, with subsequent chirps increasing in number as each transmitter is entered; the maximum being four chirps after the brief sounding of the siren when the fourth transmitter, if presented, is acknowledged.

Turning the ignition switch "off", or 15 seconds of no programming activity, will cause

22) Loud or Soft Confirmation Chirps: Default Loud (LOCK).
23) Total Closure Lock Output: Default OFF.
24) Alarm Functions Bypass: Default OFF.
25) Ignition-Activated Anti-Carjacking Protection: Default OFF.
26) Door-Activated Anti-Carjacking Protection: Default OFF.
27) Open Door Warning Upon Arming: Default OFF.
28) PANIC Button Operates "Panic" or Additional Output: Default "Panic" (LOCK).
29) Remote Start Run Time 10 / 20 Minutes: Default 10 Minutes (LOCK).
30) Gasoline Or Diesel Engine Mode: Default Gasoline (LOCK).

If 15 seconds expire without programming activity (i.e.- not pressing the LOCK or UNLOCK buttons or pressing the valet switch to select another feature), the system will exit the Features Programming Mode, which is indicated by the siren or horn sounding twice. If two failed attempts are made to enter the Features Programming Mode, two minutes

Programming Transmitters

To access the **Transmitter Programming Mode**, follow this procedure:

Step 1 - Turn the ignition "on". Within 7 seconds , press the valet switch 5 times. The system will respond by briefly sounding the siren or horn once.

This unit to be installed on automatic transmission vehicles only! Do NOT install on manual transmission vehicles.

The remote engine starting feature should not be used when the vehicle is parked in an enclosed structure or garage!

The included hood pin switch MUST be installed.

This Installation Instuctions explains the installation and connection of this system's wiring connections utilizing the included Universal Harness. Certain Omega Quick Interconnect Harnesses, which plug directly into the vehicle's existing wiring harnesses, are available.

Instructions for programming transmitters and features may be found in the Owner's Guide.

Installation

Mounting The Control Module: The Control Module contains the necessary electronics required for the system's operation. Always mount this module in the vehicle's interior compartment, in a secure location that is not easily accessible. Ensure that moisture, vibration and temperature extremes are minimized. Acceptable locations include mounting behind the dash, behind the glovebox or other interior panels.

Electronic Siren: See pages 17-18.

Wiring Connections: Quick Interconnect Harnesses provide the necessary wiring connections, and each has its own detailed, illustrated instructions. If using a universal harness, all wires should be securely connected to the appropriate vehicle wires with the proper terminals, connectors, or by soldering and insulating with quality vinyl electrical tape or heat shrink tubing. All wiring should be carefully routed to avoid the possibility of chaffing or otherwise being damaged.

Status Light and Valet Switch

LED Status Light: The Red LED Status Light may be mounted in the included
combination LED Status Light and Valet Switch holder. The Status Light should be readily visible, and the bottom of the assembly should allow easy access to the Valet Switch.
Mount the holder in a location where it can easily be seen by the driver, and preferably where

The 30 programmable features and their factory-set default settings are as follows:

1) Selectable Coded Override: Default 1 & 0 (please see the Owner's Manual).
2) Last Door Arming: Default OFF.
3) Automatic Rearming: Default OFF.
4) Starter Interrupt Circuit: Default ON.
5) Automatic Starter Interrupt: Default OFF.
6) Ignition Activated Override: Default OFF.
7) Doors Lock With Last Door Arming: Default OFF.
8) Doors Lock With Automatic Rearming: Default OFF.
9) Doors Lock With Ignition: Default ON.
10) Ignition OFF Unlock #1: Default ON.
11) Ignition OFF Unlock #2: Default ON.
12) Open Door Bypass To Previous Three Features: Default ON.
13) Confirmation Chirps: Default ON.
14) Confirmation Chirps In Valet Mode: Default OFF.
15) Activated Alarm Cycle: Default 60 Seconds (LOCK).
16) Lights On Upon Disarm: Default 30 Seconds (UNLOCK).
17) Disarm Alarm Upon Trunk Release: Default ON.
18) Doorlock Pulse Time .8 / 3 Second: Default .8 Second (LOCK).
19) Double Unlock Pulse: Default OFF.
20) Arming Delay 3 / 45 Seconds: Default 3 Seconds (LOCK).
21) Pulse Horn / Steady Siren Output: Default Pulsed Horn (LOCK).

Programming Features

This system has 30 programmable features, of which one is the Selectable Coded Override. **Please see the Owner's Guide for further details describing each Programmable Feature, and also for instructions on how to program transmitters.** These features can be configured as desired by the Features Programming Mode.

To access the Features Programming Mode, follow these steps:

Step 1 - Within 5 seconds of turning the ignition "off", momentarily press the valet switch 5 times. The system will respond by briefly sounding the siren or horn.

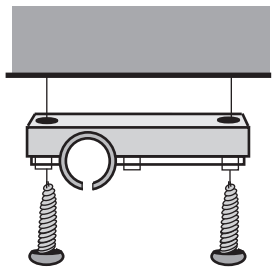
Step 2 - Within 10 seconds press the valet switch the correct number of times to enter the Selectable Code Override (default is 1 press). A correct entry results in the siren or horn sounding once, followed by two chirps.

Step 3 - __ Access the desired feature by pressing the valet switch the number of times equal to the feature number; the system will then chirp an equal number of times.

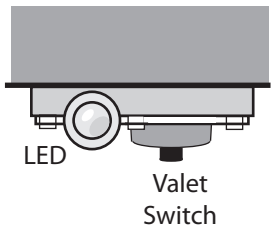
Step 4 - Change the chosen feature by pressing the transmitter's LOCK button to turn the feature "on" (indicated by one chirp), or pressing the UNLOCK button to turn the feature "off" (indicated by two chirps).

Continue by accessing the next feature with valet switch presses, followed by using the transmitter to change the setting, repeating until all features are programmed as desired.

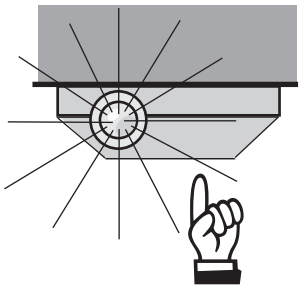
Valet Switch: The Valet Switch may also be mounted in the included combination Status Light and Valet Switch holder. The Valet Switch is essential to daily operations and



The upper half of the combination holder may be mounted with the two screws provided, or, double-sided adhesive tape may be used.



Then, when the upper half holder is secured, if the LED was removed to allow the screw clearance, replace the LED.



Snap the combination holder bottom half to the upper half. Ensure that the wires are in the upper half's slot for this purpose, and engage the clips on that side first.

The wires may be routed out of the top of the assembly, or a hole may be drilled for this purpose. Route the wires to the control module, securing them as needed. Finally, plug the LED Status Light's Red connector into the control module's Red port and the Valet Switch's Blue connector into the Blue port.

Sensor Port

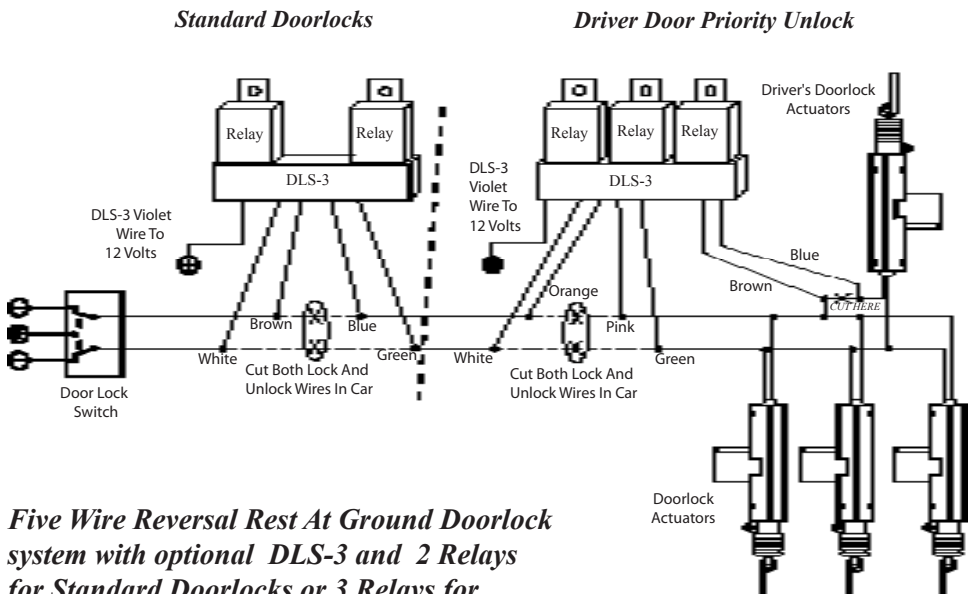
Plug-In Dual Zone Sensor Port: This system has a convenient plug-in port for an optional sensor device. This port supplies constant 12 volt, grounded output when the system is armed, a negative instant trigger input, and a negative prewarn trigger input. Most Omega Research and Development, Inc. sensors will plug directly into the alarm control module. Sensors are available which include those that monitor shock to the vehicle, detect changes in atmospheric pressure within the vehicle, and radar sensors that can detect motion inside and outside the vehicle. When adding an optional sensor, follow the installation instructions included with the sensor. After installing, route the harness and connector from the sensor to the security system control module. Plug the sensor's connector into the module's White port marked "Aux.". Please see the Owner's Guide for details on the operations of the sensor port.

Satellite Relay Port

In some cases, a particular vehicle may require more than one Ignition #1 circuit or more than one Starter circuit to be powered up. The control module has a Red 3-pin port providing these two circuits as Negative outputs, which allows easy addition of further external relays.

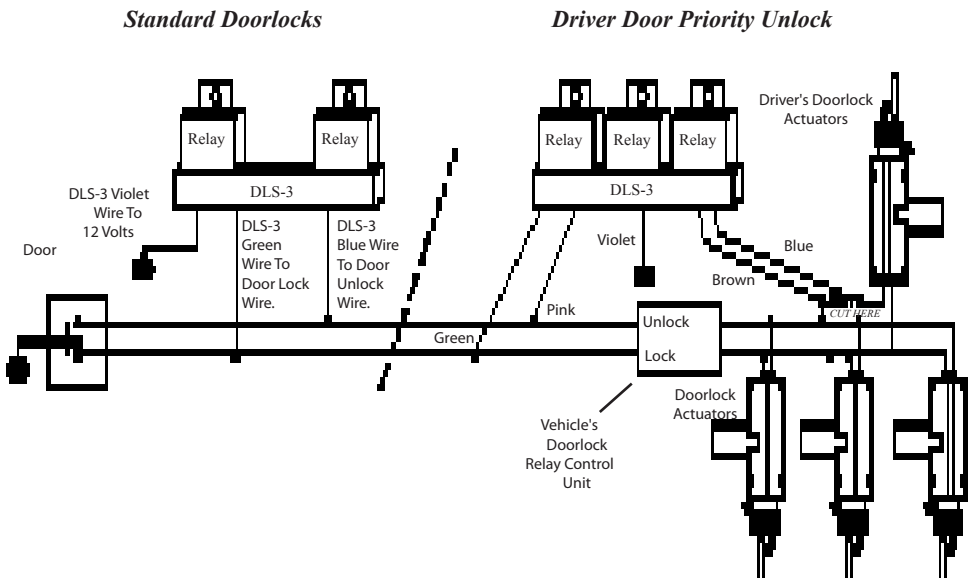
Available as an optional service part is a socket and two relays which plug into this port, and provide and additional Ignition #1 and Starter output. Also please note that certain

Optional DLS-3 and 2 or 3 SPDT Relays Continued



Five Wire Reversal Rest At Ground Doorlock system with optional DLS-3 and 2 Relays for Standard Doorlocks or 3 Relays for Driver Door Priority Unlock

Optional DLS-3 and 2 or 3 SPDT Relays Continued



Standard Doorlocks or 3 Relays for Driver Door Priority Unlock

Universal Wiring Connections - 5 Primary Wires

Black Wire - (Ground): The Black wire provides Negative ground for the security system's operation; proper connection of this wire is extremely important.

___CONNECTION: Using the correctly 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, and function, but not correctly. As the alarm can partially operate, a bad ground wire connection would not likely be suspected.

Black Antenna Wire & Extended Range Antenna Option -

The Black wire attached to the control module is the antenna wire. <u>Do not connect this wire to anything or the transmitter's range will be reduced or eliminated</u>. Stretch the Black antenna wire out and as high as possible for the best operating range, or use the optional Extended Range Antenna for the best performance. The Extended Range Antenna plugs into the control module's White 2-pin port, beside the standard antenna wire. When

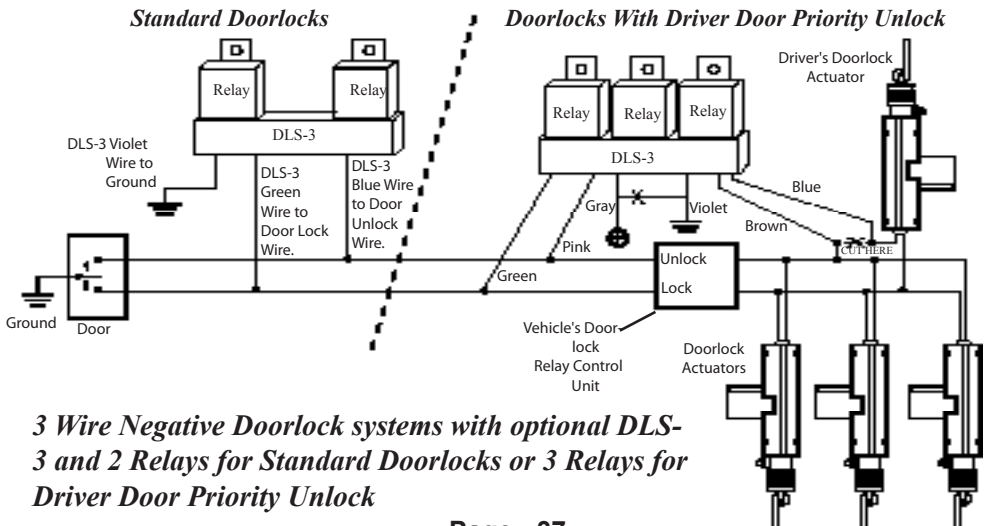
Red Wire - (Constant Power): The Red wire supplies constant Positive 12 Volts for the system's operation. This wire must be supplied sufficient amperage.

CONNECTION: Connect this wire to Positive battery voltage. The most common source is the battery's Positive terminal. If the battery is selected as the power source, start at the battery and route the Red wire to the control module. Carefully route the long Red wire through the firewall, using an added or existing grommet. Avoid any hot or moving parts. The fuse holder should always be close to the power source connection, not the control module. An insulated terminal is provided for the control module end; this allows cutting the Red wire to length, if desired. Connect the ring terminal attached to the fuse holder to the battery's Positive terminal. After all of the other wiring connections have been made, insert the Green 30 amp fuse into the fuse holder. Some vehicles have a single Constant 12 Volt circuit supplying the ignition switch. A schematic of the car's electrical system will show if this is the case. If so, the Red wire may be connected at the ignition switch wiring harness, but the fuse holder and 30 amp fuse must also be used. **The use of the 30 amp fuse and the fuse holder is required! Failure to properly install the fuse holder and the 30 amp fuse will void all warranties.**

Blue Wire - (Ignition #1 Input/Output): The Blue 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 features. Also note that this circuit is both an input and output. When remote starting, this output supplies 12 Volts Positive to the vehicle's ignition circuit. This

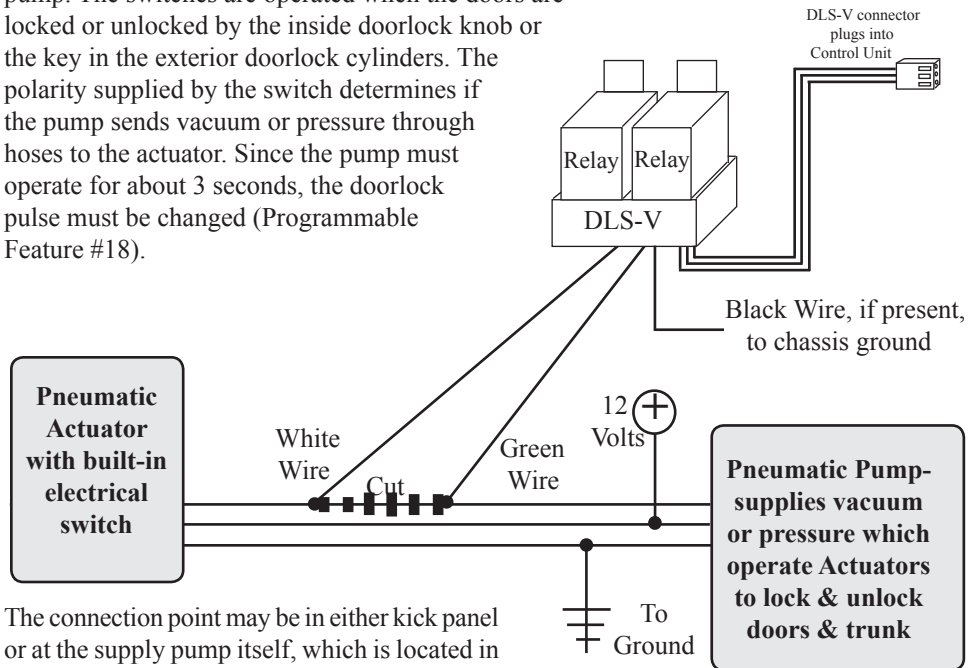
Optional DLS -3 and 2 or 3 Relays - Driver Door Priority Unlock

The DLS-3 is a triple relay socket (three relays are also needed) and is the most universal interface which allows the security system to lock the vehicle's doors, unlock only the driver's upon disarming (driver's door unlock priority) and, if desired, a second press of the transmitter's button within 5 seconds of disarming will unlock all of the doors. The DLS-3 used with two relays can be used in place of the DLS to lock and unlock all doors.



3 Wire Negative Doorlock systems with optional DLS-3 and 2 Relays for Standard Doorlocks or 3 Relays for Driver Door Priority Unlock

pump. The switches are operated when the doors are locked or unlocked by the inside doorlock knob or the key in the exterior doorlock cylinders. The polarity supplied by the switch determines if the pump sends vacuum or pressure through hoses to the actuator. Since the pump must operate for about 3 seconds, the doorlock pulse must be changed (Programmable Feature #18).



The connection point may be in either kick panel or at the supply pump itself, which is located in the trunk or under the rear seat.

safety circuit, receives a transmitter command to stop running, or if the programmed run time expires, this output will stop supplying power, which stops the running engine.

CONNECTION: This wire must be connected to the vehicle's Ignition #1 (also known as Primary Ignition) wire. The proper vehicle wire will measure Positive 12 Volts when the ignition key is in the "Run" and "Start" positions and no voltage in the "Off" and "Accessory" positions. This wire is found in the ignition switch wiring harness. If two or more Primary Ignition wires are present, an optional dual relay socket and one or two relays may be used on the additional wire(s). If more than three Primary Ignition wires are present, you will also need an optional additional relay for each wire.

Yellow Wire - (Ignition #2/Accessory Output): The Ignition #2/Accessory Yellow wire's operation differs from the Ignition #1 Blue wire's operation. When remote starting, this output supplies 12 Volts Positive to the vehicle's chosen circuit as soon as remote starting is activated, but stops while the starter is engaged. Once the engine starts and the starter disengages, this wire returns to having 12 Volts Positive output. From this point in the remote starting cycle the Yellow wire continues to supply power to the chosen vehicle circuit for the duration of the remote start engine run period. If the system detects a violated safety circuit, receives a transmitter command to stop running, or if the programmed run time expires, this output will stop supplying power.

CONNECTION: Connect this wire to the vehicle's Ignition #2 or Accessory wire. This circuit in the vehicle can vary in its function. Its primary function is to supply power to the Heat, Ventilation and Air Conditioning (HVAC) system. The connection point for

is also found in the ignition switch wiring harness. In some cases the correct vehicle wire will show Positive 12 Volts in the "Run" and "Accessory" ignition key positions but in other vehicles it will show the voltage only in the "Run" ignition key position. This output should not be used if the vehicle's wire also shows voltage when the ignition key is in the "Start" position.

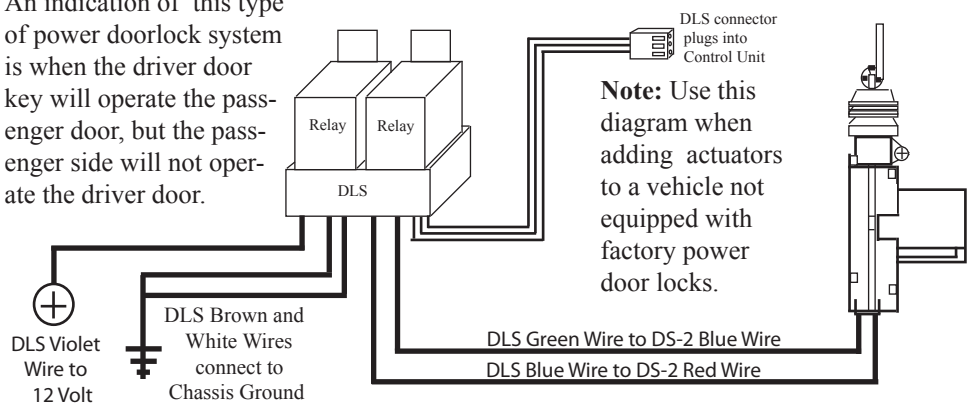
Green Wire - (Starter Output): When remote starting, this output supplies 12 Volts Positive to the vehicle's starter circuit. The Green wire is best connected when installing the starter interrupt circuit. Its connection point must be on the starter side of the interrupt, not the Ignition Switch side. This easily accomplished when installing the starter interrupt by combining the Green Starter Output wire with the starter interrupt's White wire and then connecting both of these wires to the starter side of the cut vehicle wire. This is explained in further detail on Pages 13-14.

CONNECTION: Connect this Green wire to the vehicle's Starter wire. This wire will show Positive 12 Volts when the ignition key is in the "Start" position only. This wire is also found in the ignition switch wiring harness. Some vehicles have a second Starter wire known as a "Cold Start" wire. When this second wire is present, if the two Starter wires are the same circuit you may connect both of these wires to the Green wire. If the two Starter wires are separate circuits, an additional relay is recommended.

Cranking Output Adjustment: The adjustment on the control module can used to slightly lengthen or decrease the starter output periods. If needed, turn the adjustment clockwise to increase starter time, or counterclockwise to decrease starter time.

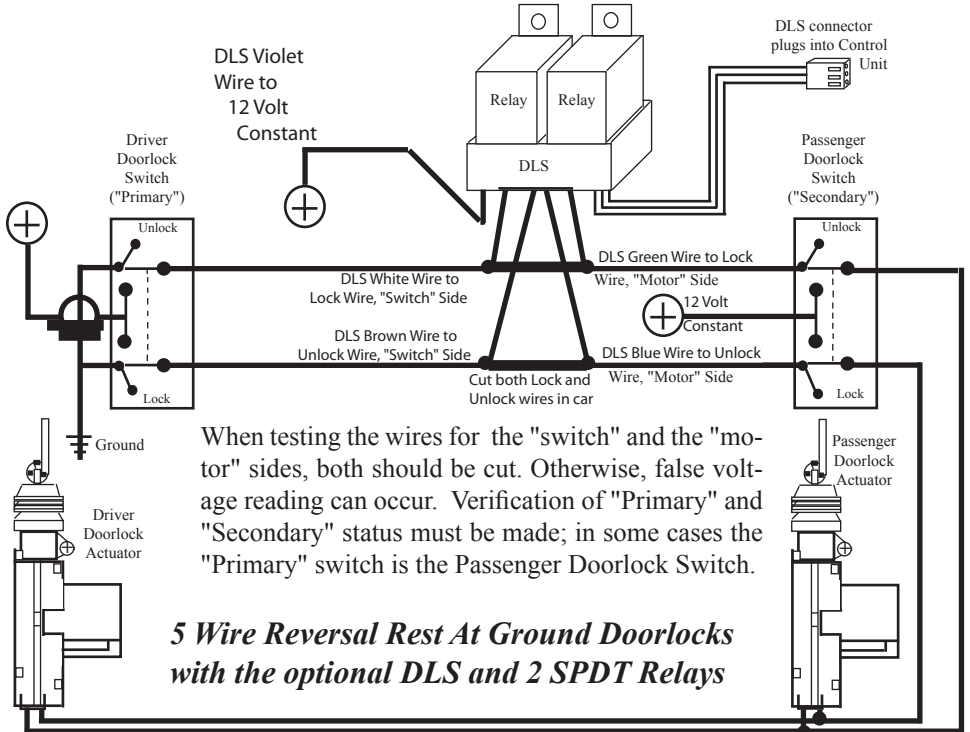
Adding the optional DS-2 Actuator and the DLS and 2 Relays

Some vehicles have a type of power doorlock system in which mechanically locking and unlocking the driver's door will operate an electrical switch in the door which supplies voltage to actuators in the other doors. There is no actuator in the driver's door, only a switch. An indication of this type of power doorlock system is when the driver door key will operate the passenger door, but the passenger side will not operate the driver door.



Vacuum Doorlocks and the optional DLS-V and 2 Relays

This doorlock system is used on older Mercedes Benz vehicles and consists of electrical switches (built into pneumatic actuators) which supply 12 volts or ground to a pneumatic



When testing the wires for the "switch" and the "motor" sides, both should be cut. Otherwise, false voltage reading can occur. Verification of "Primary" and "Secondary" status must be made; in some cases the "Primary" switch is the Passenger Doorlock Switch.

5 Wire Reversal Rest At Ground Doorlocks with the optional DLS and 2 SPDT Relays

4-Wire Connector

Yellow/Black Wire - (Positive Brake Input): **The Yellow/Black wire <u>must</u> be connected.** It is a critical safety feature which disables remote starting operations whenever the brake pedal is pressed.

CONNECTION: Connect the Yellow/Black wire to the brake switch wire which shows Positive 12 Volts when the brake pedal is pressed. The brake switch is typically located above the brake pedal, and usually mounted to the brake pedal support bracket. Always make this connection in a fashion ensuring its long-term reliability; soldering is highly recommended.

Upon completing the installation, always test the Yellow/Black wire's operation. Attempt to remotely start the vehicle while holding the brake pedal depressed; the system should respond with one long and four short chirps. Release the brake pedal and remotely start the engine. Once running, pressing the brake pedal should stop the engine. **Always perform this test before testing the neutral safety input.**

White/Blue Wire - (Neutral Safety Input): This circuit is another critical safety feature which enables the system's remote start operations. Connect the White/Blue wire to the vehicle's Negative neutral safety wire.

CONNECTION: The target wire will show Negative Ground whenever the gear selector is in the "Park" or "Neutral" positions. Once the target wire is located, securely connect the White/Blue wire to it.

Some vehicles, however, do not have a grounding-type neutral safety switch. These vehicles instead have the starter circuit routed through a switch which closed only when the gear selector is in the "Park" or "Neutral" positions; in other gear positions the switch is open, thus preventing the starter from engaging. When installing in this type of vehicle, the White/Blue wire may be directly grounded, or connected to the parking brake warning circuit. If the later option is chosen, ensure that the parking brake warning circuit is grounded when the parking brake is applied. An electrical schematic of the vehicle or consulting Omega's vehicle wiring data base will save much time in determining the type of neutral safety circuit.

Regardless of the type of connection, the vehicle must be tested to ensure that it cannot be remotely started while in forward or reverse gears.
Before returning the vehicle to the owner, place the vehicle in a parking lot or other open area. Sit in the driver's seat and be ready to apply the brake, if needed. Engage the remote starter in each gear position. If this safety feature is operating properly, remote starting will only be possible if the gear selector is the "Park" or "Neutral" positions; in all other positions the system will instead respond with one long and one short chirp and the starter will not engage. **Never fail to perform this test!** If a fault is found in the neutral safety operation, it must be corrected before returning the vehicle to the owner. If the vehicle in question lacks a neutral safety circuit, one must be fitted before installing any type of remote starting system.

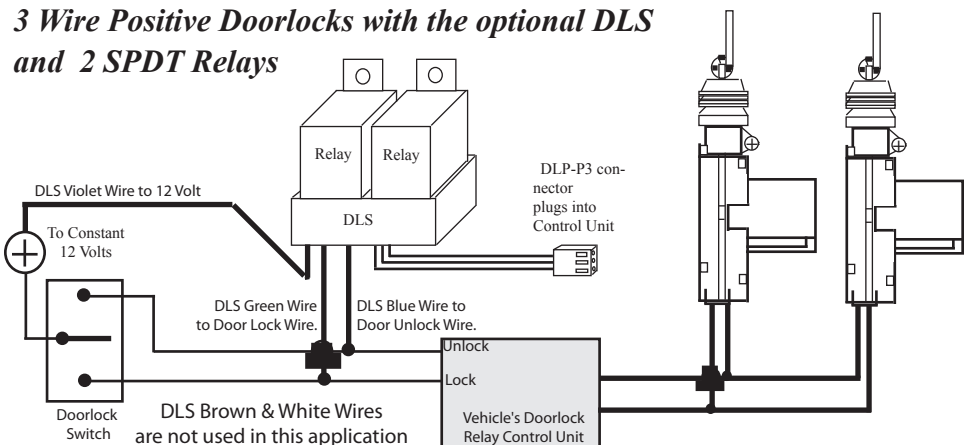
5 Wire Reversal Rest At Ground Systems: This power doorlock system differs from the negative and positive pulse systems in the fact that there are no relays or doorlock control unit. In this type of system, the switches themselves supply the positive voltage directly to the doorlock actuators, and, more importantly, provide the return ground path. The correct doorlock interface for this type of system is the optional DLS or DLS-3 and 2 or 3 relays. The important thing to remember is the wires in this system *rest at ground,* which means that the wires must be "opened", or cut, to make the connections.

Examine the wires on the back of the switch. Normally five wires will be found. Of these wires, one will be constant 12 volts positive, regardless of the switch's position. Two wires will be grounded regardless of the switch's position. Of the two remaining wires, one will show 12 volts positive when the switch is pushed to "lock", and the other will show 12 volts positive when the switch is pushed to "unlock".

These two wires are both routed to the doorlock actuators and are connected to either end of the actuator's motor winding. When the switch is pushed to one position, one of these two wires will have 12 volts. This voltage flows through the wire to the actuator's motor winding, and since the other wire is still *resting at ground* an electrical circuit is completed. When the switch is pushed to the opposite position the electrical flow is *reversed*. When the correct wires are found, they must be cut. Notice in the diagram (following page) that the driver's switch is the primary switch and referred to as the "switch" wires. The wires that go to the secondary switch are referred to as the "motor" wires. Even though the cut is made between the switches, the two sides are still correctly called the "switch" and the "motor" sides, with consideration of "Primary" and "Secondary" switch; please see the

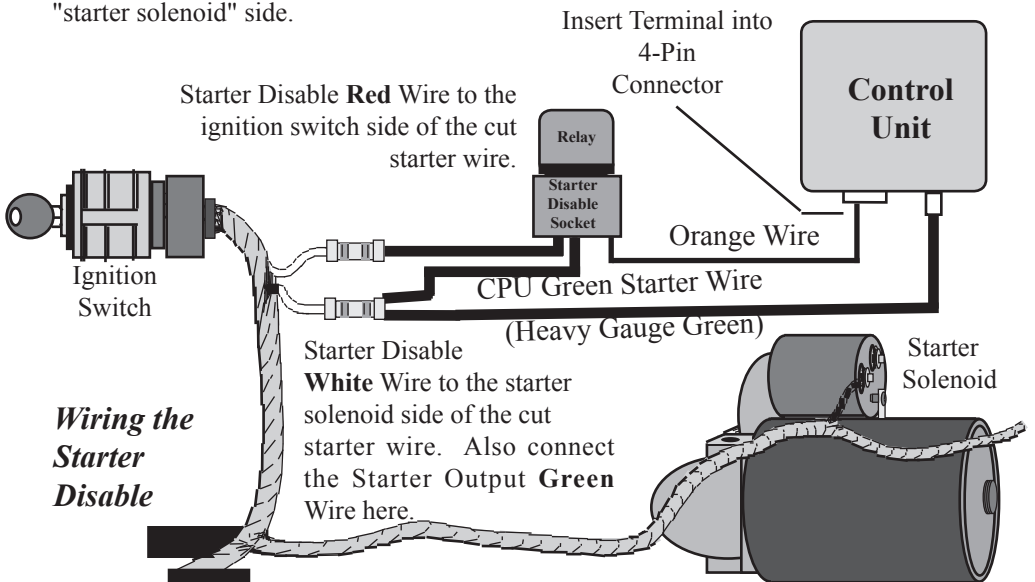
Model DLS- The DLS is a dual relay socket with a harness and connector to plug into the alarm control module and non-terminated wires to splice into the vehicle's wiring. The DLS and two relays are the most universal doorlock interface available. The relays used with it are standard 30 amp single pole, double throw (SPDT) automotive relays.

3 Wire Positive Doorlocks with the optional DLS and 2 SPDT Relays



Orange Wire - (Negative Output While Armed): The Orange wire is a starter interrupt output, which is active whenever the security system is in an armed state. Cutting the vehicle's starter wire will result in two sides- the "ignition switch" side and the "starter solenoid" side.

Wiring the Starter Disable



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 Positive 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.

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.

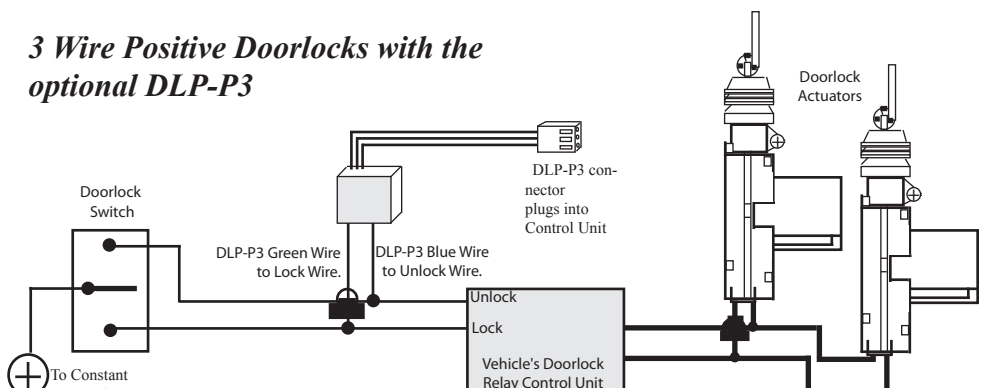
Gray Wire - (Negative Trunk Release Output): The Gray wire is an optional output; typically the primary use is for trunk release. Unless the vehicle's existing trunk release switch draws no more than 250ma, an optional relay must be used.

CONNECTION: Connect the Gray wire to relay pin (85), and connect Constant Positive 12 Volts to relay pin (86). Connect pin 30 to power, or ground, as needed. Pin #87 is then connected to the vehicle's trunk wire.

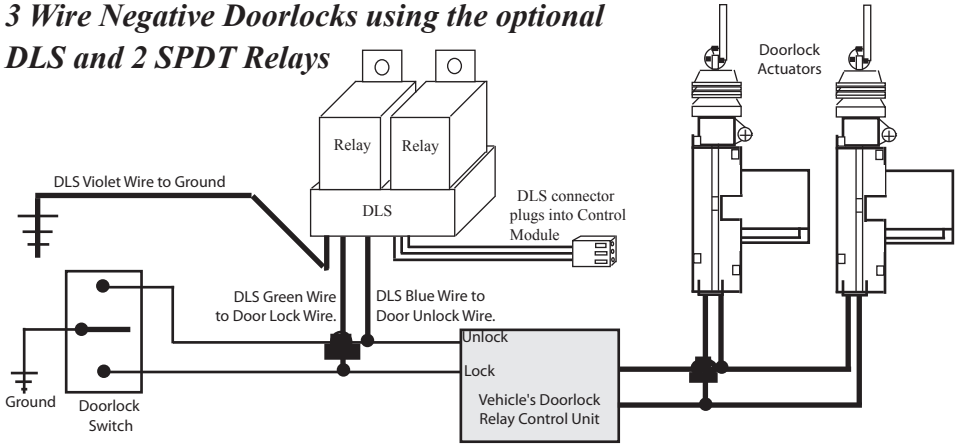
pushed to "unlock". Since the security system's output polarity must be reversed from negative ground to 12 volts positive, an optional doorlock interface must be used. Three interfaces are available - the models DLP-P3, or the DLS and the DLS-3 with optional SPDT relays. The DLS-3 is discussed in detail later.

Model DLP-P3 - Three pin connector with a transistor converter network which changes the security system's negative pulse doorlock outputs to positive pulses. Allows direct connection of the security system's outputs directly to a vehicle with positive pulse doorlocks. Overall length 20". Easier and more efficient than using relays for vehicles that have positive pulse doorlock systems.

3 Wire Positive Doorlocks with the optional DLP-P3



3 Wire Negative Doorlocks using the optional DLS and 2 SPDT Relays



3 Wire Positive Pulse Systems: This power doorlock system is very similar to the three wire negative pulse system except the vehicle's doorlock switches use 12 volt positive pulses to operate the vehicle's doorlock relays or control unit. Examine the wires on the back of the switch. Of the three wires, one will be constant 12 volt positive, regardless of the switch's position. Of the two remaining wires, one will show 12 volt positive when the switch

Green 2 Wire Connector

Orange/Black Wire - (Tach-Sensing Wire): The Orange/Black wire is an engine speed or tachometer sensing wire. The system actually uses two different methods of monitoring the engine's starting/running status during the remote starting process- the Orange/Black tach wire, and voltage sensing. The tach wire is typically more accurate in monitoring the engine status, and its use is recommended. There is no programming involved, or need to configure the unit for one method or the other, as the system will automatically use either the tach wire input, or voltage sensing.

___**CONNECTION:** Connect the Orange/Black wire to the vehicle's tach wire, which is typically found in the engine compartment, although in some cases it may also be located inside the vehicle. To use a multimeter to verify the correct tach wire, set it for AC Volts scale. The correct wire will read 1 to 6 volts AC with the engine idling, and the reading will increase with engine speed.

Yellow/Red Wire - (Factory Disarm Wire): The Yellow/Red wire produces a Negative pulse output whenever the system is disarmed or remotely starts the engine. This output may be used to disarm a factory-installed alarm, if present.

___**CONNECTION:** Connect the Yellow/Red wire to the vehicle's factory disarm wire. This wire will show Negative polarity when a key is held in the "unlock" position in the door key cylinder. This wire can typically be located in either kick panel, in the wiring harness from the door, as it runs between the door key cylinder and the factory alarm.

8 Wire Connector

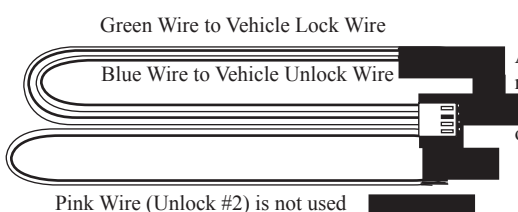
Brown Wire - (Negative Audible Output): The Brown wire is a Negative output (at 1 Amp) for the system's audible output, and can operate either the electronic siren or vehicle's existing horn. Programmable Feature #21 should be set for the pulsed output to properly sound the horn, or set for steady output for the siren. When Feature #21 is set for "pulsed" output, Feature #22 offers two settings for adjusting the horn's confirmation chirps.

The Electronic 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 siren must be pointed downward to avoid moisture collecting inside it and to enhance sound dispersal. When the siren is used, please note that Programmable Feature #21 must be changed to the "steady" setting.

Electronic Siren Option CONNECTION: Connect the Brown wire directly to the siren's Black wire. The siren's Red wire is then connected to a Constant 12 Volt Positive source. The security system has a provision for this connection, which is located on the control module beside the 4-pin PCB stand-up. If desired, instead of using the provided siren Constant 12 Volt terminal, another source may be used. If this connection is made at the vehicle's battery, apply an appropriate protective coating to the connection.

3 Wire Negative Pulse Systems: This power doorlock system is indicated by the presence of three wires at the switch. Of these, one will show constant ground, regardless of whether the switch is being operated or not (at rest). Of the remaining two wires, one will show ground when the switch is pushed to the "lock" position, and the other wire will show ground when the switch is pushed to the "unlock" position. With the switch at rest, these two wires will read voltage, usually 12 volt positive but in some cases less. The wires from the switches operate doorlock relays or a doorlock control unit with built-in relays. The correct connection point is between the switches and the relays.

The included harness can allow direct connection between the security system and the "lock" and "unlock" operation of the 3-Wire Negative Pulse system. Some doorlock systems, however, require more than the 500ma ground output that the security system's control module can accommodate. In these cases the optional model DLS and two relays must be used. When driver's door unlock priority is desired, the correct universal interface is the DLS-3.



DLP-N4 -Four-pin connector with three wires. Allows direct connection of the security system's negative pulse outputs directly to a vehicle's negative pulse doorlocks, or to facilitate custom hard-wiring of optional relays.

Power Doorlock Interface Port

Plug-In Power Doorlock Interface Port: This system features a plug-in port for an optional doorlock interface, allowing it to operate the vehicle's existing power doorlocks. The 4 pin port on the system's control module produces a negative pulse for locking the doors (inside pin), a constant 12 volt pin *for the optional relay coils only* (second pin from inside), a first negative pulse for driver door unlock (second pin from outside), and a second negative pulse for unlocking all other doors (outside pin). The doorlock interface needed will depend upon the type of power doorlocks the vehicle has.

CONNECTION: Quick Interconnect Harnesses are available for power doorlock applications, and provide the necessary wiring connections; each has its own detailed, illustrated instructions. If using a universal interface, of which several models are offered, identify the type of doorlock system and obtain the correct interface. Connections, which are shown in the following pages, should be with proper terminals, connectors, or by soldering and insulating with quality vinyl electrical tape or heat shrink tubing. All wiring should be carefully routed to avoid the possibility of chaffing or otherwise being damaged.

The vast majority of power doorlocks are found as three system types: 3 wire negative pulse, 3 wire positive pulse and 5 wire reversal, rest at ground. Other power doorlock systems which may be encountered are the vacuum pump types found in older Mercedes vehicles and the single wire, dual-voltage which has appeared in some late model vehicles. The best way to identify a doorlock system is to examine the doorlock switch's wiring.

Existing Horn Option CONNECTION: The Brown wire may be connected directly to the vehicle's horn switch wire, provided the circuit operates with 1 Amp of current or less.

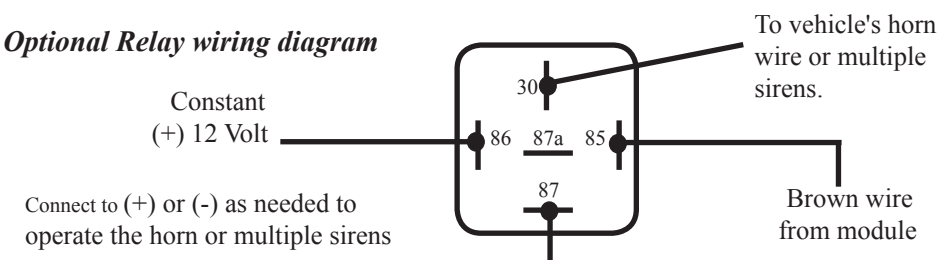
This wire is typically found around the steering column; the correct wire will show Positive 12 Volts normally, and no voltage when the horn is being sounded. Once the vehicle's horn wire is identified, probe the wire with a standard test light connected to Negative chassis ground. If the horn sounds when probed, a direct connection may be made. If not, use the following diagram to configure an optional relay.

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!

Another alternative is to disconnect the horns, then operate the horn switch. Typically, a "clicking" sound from the vehicle can heard as the horn button is pressed, and released, which confirms the presence of an existing horn relay. Yet another alternative is to con-

Optional Relay wiring diagram

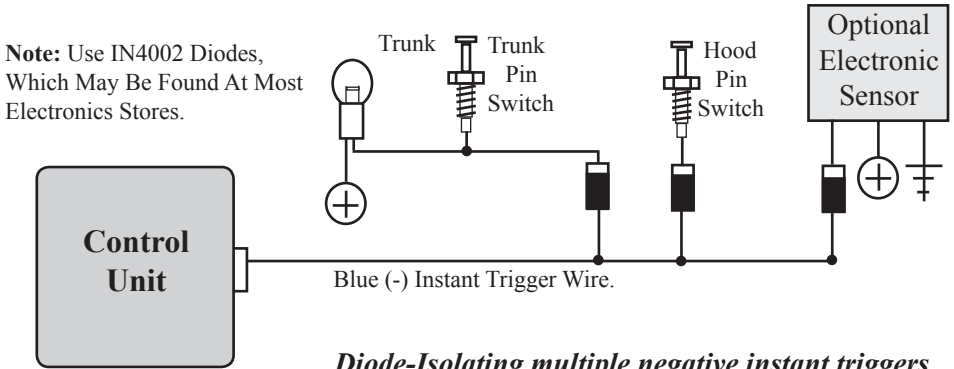


Configuring An Optional Relay: The Brown Horn/Siren output wire has a 1 Amp capacity, which, if exceeded, can damage the security system control module. In certain situations, such as a vehicle which lacks a horn relay or installing multiple optional sirens, an optional SPDT relay is required. The preceding diagram shows how to configure the optional relay.

White Wire - (Positive Flashing Light Output): This is a Positive 12 Volt output to flash the vehicle's parking lights.

CONNECTION: Connect this wire to the vehicle's Positive 12 Volt parking light circuit, which 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. Some vehicles, notably Toyota, have a parking light relay which is triggered by a Negative Ground circuit from the headlight switch. The White wire can still be connected directly in these vehicles by finding the parking light circuit after the relay, typically at the Fuse/Junction Block.

The correct wire will show Positive 12 Volts when the headlight switch is in the "Parking Light" and "Head Light" positions. When such a wire is located, also test to ensure 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 connect the White wire to a rheostated (dimmer) circuit! This will backfeed the parking lights



Diode-Isolating multiple negative instant triggers

Pink Wire - Additional Output: The Pink wire is an optional output similar to the Gray trunk release wire; however, this output is not capable of disarming the system when it is used and therefore no audible or visual confirmation.

CONNECTION: For most applications an optional relay will be needed; connect the Gray wire to relay pin #85, and connect Constant Positive 12 Volts to relay pin #86. Connect pin #30 to power, or ground, as needed. Pin #87 is the output, and connected to the

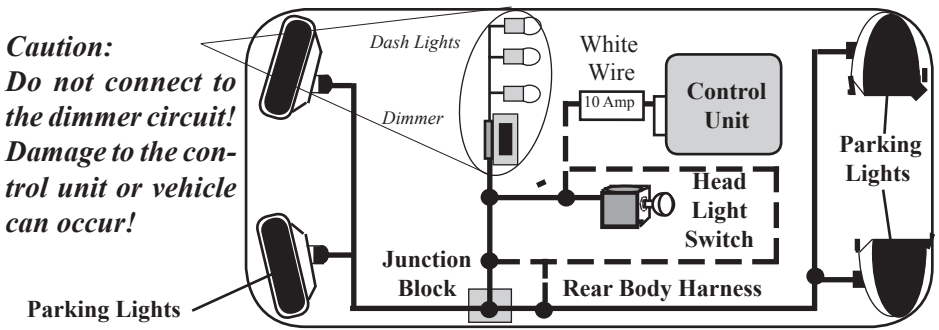
lights illuminating when the exterior door handle is lifted is an example of this type of switching system. Also be aware of vehicles which diode-isolate each door. Typically, this is usually encountered with dash displays that indicate individual doors being ajar. The proper wire to connect to in this type of system is the common wire which is routed to the dome light itself.

Blue Wire - Negative Instant Trigger: The Blue wire is a Negative instant trigger used primarily to detect entry into the hood or trunk area of a vehicle.

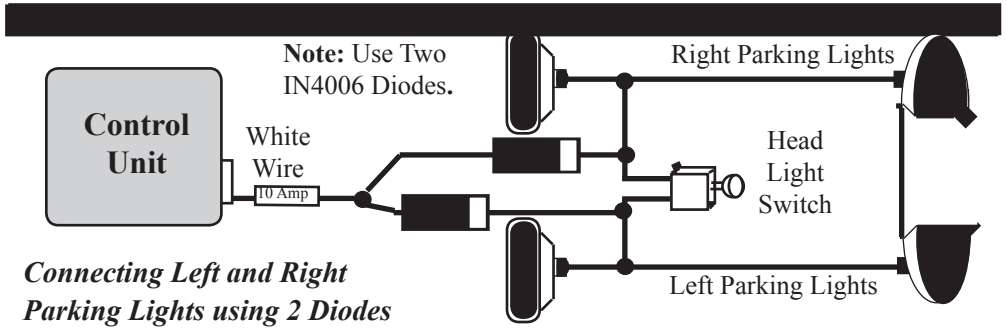
___**CONNECTION:** The included pin switches may be installed to provide this trigger circuit; or, if there are existing switches (example: a light in the luggage compartment or a "Trunk Ajar" light in the dash), the Blue wire may be connected directly, provided this is a negative ground switching circuit. An indication of such a circuit is the wire having no voltage present when the hood or trunk is open, and up to 12 volts when the hood or trunk is closed. This wire cannot be used with mercury switch types of hood or trunk lights. If the vehicle is equipped with a usable trunk or hood circuit, locate the proper wire and splice the Blue wire directly to the vehicle's wire.

When wiring more than one of the vehicle's circuits and/or additional circuits to this wire, diode-isolation may be required to maintain each circuit's proper operation. An example would be wiring a hood pin switch and trunk light switch together. Without isolating, the trunk light will turn illuminate whenever the hood is raised. Also, diode-isolation is necessary when combining electronic sensors together, or when adding a sensor in the same circuit as the pin switches.

3 Possible Parking Light connections



Many European imports have separate left and right side parking lights. When left & right parking lights are on separate circuits, a pair of 6 to 10 amp diodes must be used to connect the White wire to each parking light side. **Note:** Flashing the headlights is not recommended. The halogen headlights found in modern vehicles are not designed to be rapidly turned on and off, and if connected to the security system, a reduction of their useful life may be noticed. If flashing the headlights is still desired, a relay must be used, since the headlight's current draw exceeds the 7 amp rating of the built-in relay. If flashing headlights and parking lights are desired, use two relays - configure one relay to supply the parking lights and the other relay to supply the headlights.



Connecting Left and Right Parking Lights using 2 Diodes

"Smart Trigger" Feature

This unit has unique "Smart Trigger" feature which saves installation time while offering enhanced integration flexibility. The Green/Violet Domelight Supervision output wire has an additional function; it is also a door trigger input circuit, serving the same purpose as either the Green or Violet door trigger wires.

To use the Smart Trigger feature, if the Green/Violet Domelight Supervision output wire is connected correctly, it is not necessary to connect either the Green Negative Door Trigger or the Violet Positive Door Trigger wire.

The Smart Trigger feature may be used or not used, as desired by the installer. If Smart Trigger is utilized, please note that **the polarity must be programmed** (via the jumper

__Green Wire - (Negative Door Trigger): The Green wire is an "open door" input to the control module for vehicles having *Negative switching* door pin switches.

CONNECTION: Connect the Green wire to a wire in the vehicle which is common to all the door pin switches; the correct wire in this type of dome light/door jamb pin switch system will have no voltage present and will also show chassis ground when the doors are opened, and up to 12 volts when the doors are closed.

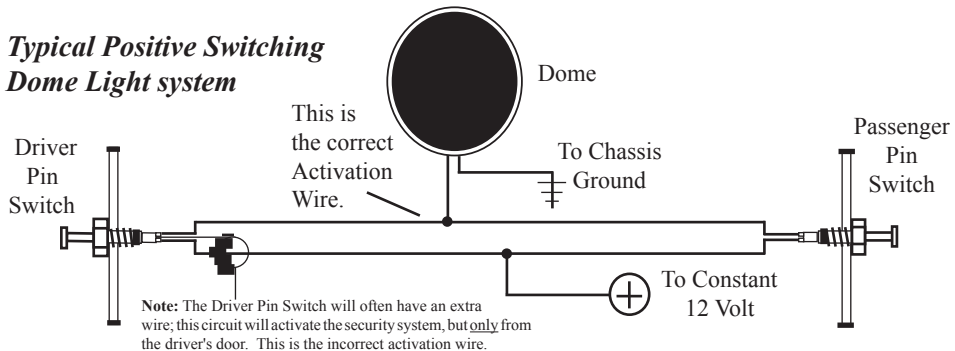
Violet Wire - (Positive Door Trigger): The Violet wire is identical to the Green Door Trigger wire, with the sole exception that it is an open door input to the control module for vehicles having *Positive 12 volt* door pin switches.

__CONNECTION: Connect the Violet wire to a wire in the vehicle which is common to all the door pin switches; the correct wire for this type of dome light/door jamb pin switch system will have 12 volts present when the doors are opened, and chassis ground when the doors are closed.

Notes, both types: The correct wire will show this change when any of the doors are opened. If the vehicle has delay dome lights, remember to take this into account when testing the wire. If the pin switch is mounted in the metal structure of the vehicle, and the dome light goes out when the switch is removed, suspect a grounding-type dome light system. While the traditional pin switch is mounted in the front door jamb area, also be aware that many vehicles utilize other types of switch devices to operate the interior lights. Some imports have a sliding type of switch and many have the pin or sliding switches in the rear door jamb area. In addition, some vehicles utilize switches in the doors, either connected to the exterior door handles or to the latching mechanism. A vehicle which has the dome

The correct wire for a Positive switching type of dome light/door jamb pin switch system will have 12 volts present when the doors are opened, and chassis ground when the doors are closed.

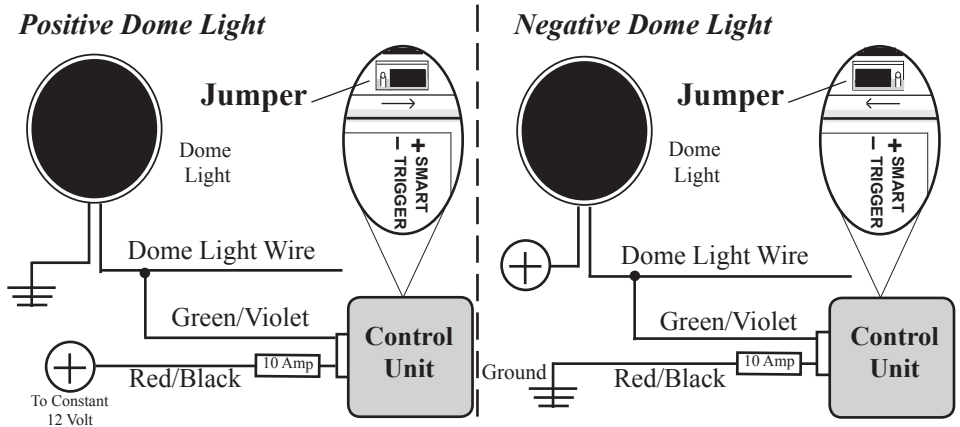
Typical Positive Switching Dome Light system



Green & Violet Wires - (Negative & Positive Door Triggers):

If not using the Smart Trigger feature, either the Green Negative Door Trigger or the Violet Positive Door Trigger wire must be connected. If the Smart Trigger feature is being utilized, do not connect the Green Negative Door Trigger or the Violet Positive Door Trigger; insulate the ends and secure the wires. Or, remove these wires from the 8-pin harness completely by depressing the lock tabs on each wire's terminal, and then pulling the wire and terminal from the 8-pin connector.

connector on the side of the control module) for "positive switching dome light" or "negative switching dome light":



If use of the Smart Trigger feature <u>is not desired</u>, <u>remove completely the polarity selection jumper</u>. Doing so separates the dome light supervision circuit from the door trigger circuits. The Red/Green and Green/Violet wires may then be connected for the Domelight Supervision <u>only</u>, and either the Green Negative Door Trigger or the Violet

Positive Door Trigger wire must be connected for the system's door trigger. In some cases, when opting for automatic rearming or last door arming, it may be preferable to not use the Smart Trigger, and connect the appropriate door trigger wire for the best operation of the automatic arming or rearming feature.

Red/Black & Green/Violet Wires - (Domelight Supervision):

The Red/Black and Green/Violet wires are provided for domelight supervision, which illuminates the interior lights of the vehicle upon disarming.

CONNECTION: The polarity of the dome light supervision output must be selected by the connection of the Red/Black wire as Positive or Negative. Determine which polarity the vehicle uses to operate the dome light; this is either "Negative switching" or "Positive switching"; the following pages explain more on how to determine which type is present. Then, connect the Red/Black wire to Positive or Negative as needed.

After connection of the Red/Black wire is completed, the next step is to **ensure that the Smart Trigger jumper is in the correct polarity setting**.

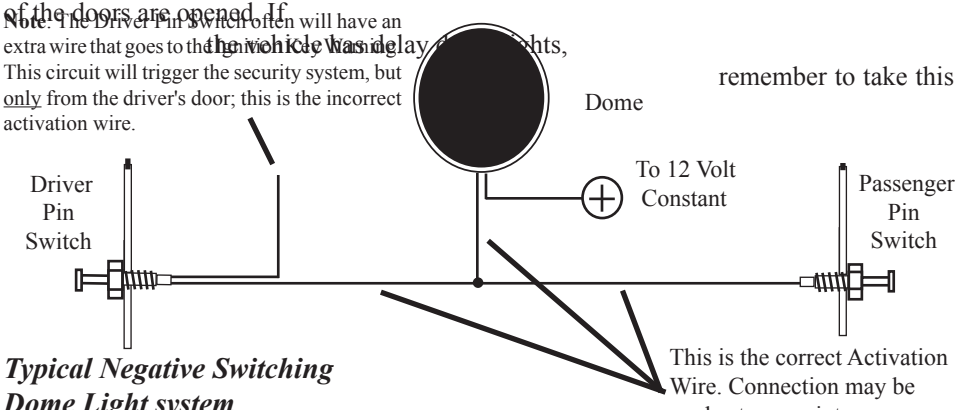
Note: The Smart Trigger is set at the factory for the "-" (Negative) setting, as Negative switching dome light systems are more common than Positive switching systems.

If the Red/Black wire was connected to Negative polarity, the Smart Trigger jumper should be aligned with the "-" symbol; if the Red/Black wire was connected to Positive polarity, the Smart Trigger jumper should be aligned with the "+" symbol. **If desired, the Smart Trigger feature may be removed entirely by removing the polarity selecting jumper**. If this is done, either the Green Negative door trigger wire or the Violet Positive Door

Trigger wire **must be connected** in order for the control unit to detect an open door. Once the Smart Trigger jumper has been properly configured, the Green/Violet wire may be connected to the vehicle's dome light activation wire.

The proper vehicle wire to connect the Green/Violet wire to, the dome light activation wire, is common to all the door pin switches. The correct wire will change polarity as the doors are opened and closed. If the vehicle uses a Negative switching dome light system, the activation wire will have no voltage present and show chassis ground when the doors are opened, and up to 12 volts when the doors are closed. The correct wire will show this change when any of the doors are opened. If the vehicle has delay dome lights, remember to take this

Note: The Driver Pin Switch often will have an extra wire that goes to the Vehicle's Warning. This circuit will trigger the security system, but only from the driver's door; this is the incorrect activation wire.



Typical Negative Switching Dome Light system