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MI_FREE-200/FREE-300ATV

The logo for FREEDOM KEYLESS ENTRY & SECURITY. The word "FREEDOM" is in large, bold, black capital letters. The letter "F" is stylized with a white star inside its top bar. The letter "O" is also stylized with a white star inside it. Below "FREEDOM" is the phrase "KEYLESS ENTRY & SECURITY" in a smaller, bold, black sans-serif font. A small trademark symbol (TM) is located at the end of "SECURITY".

""PROTECT YOURSELF AND YOUR INVESTMENT

INSTALLATION MANUAL

MODEL: FREE-200 & FREE-300^{ATV}

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3) To learn the first transmitter : Press the large transmitter button which will be used to arm, disarm, and panic the alarm, until one siren burst and one short siren chirp is heard to confirm that the code was learned. The small button will automatically be learned.

4) To program the second, third or fourth transmitter, repeat step #3. As each transmitter is learned, the long confirmation chirp will be followed by two short chirps for transmitter number two, three short chirps for transmitter number three, and four short chirps for transmitter number four. An attempt to add any further transmitter codes will be ignored.

5) Turning off the ignition switch will automatically turn off the transmitter learning code program, which is confirmed by two siren chirps.

FREE-300^{ATV} Only - Code Jumping™

The FREE-300^{ATV} features Code Jumping™ transmitters and system control unit.

Each time a code is broadcast to the security system, the transmitter and security system will advance to another code to use for the next transmission. This prevents "code grabber" units from copying the transmitter to operate the security system. Please note that pressing the arm / disarm button on the transmitter at any time while out of range of the security system can advance the code beyond the range of recognition. If this occurs, simply press the arm / disarm button a few times to synchronize the transmitter and the security system.

pulse, which will make the confirmation horn honk louder.

9) Open Door Arming Alert: When this Feature is utilized, if one of the vehicle's doors is open when the system is armed using the transmitter, the siren will chirp 3 times instead of once upon arming the alarm.

Programming Transmitters

This security system will respond to up to 4 different transmitters, and comes from the factory with two transmitters already programmed into the system's memory. The alarm control module, through a code-learning procedure, "learns" each transmitter's code. When a transmitter code is programmed into the system, all previous codes will be deleted. If a third or fourth transmitter is desired, all of the transmitters must be programmed into alarm's memory. When adding transmitter codes to operate the alarm, follow this process:

- 1) Turn "on" the ignition switch.
- 2) Within 5 seconds of turning "on" the ignition, press the valet switch 5 times. The system will respond with a long siren burst, confirming it is ready to learn a transmitter code. When the ignition switch is turned "off", the learning process will automatically terminate, which will be indicated by two long siren bursts. When the first transmitter is learned, all prior codes will be erased.

Installation

Mounting The Main Control Module: The Main Control Module contains the electronics necessary for the security 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 may include mounting behind the dash, behind the glovebox or other interior panels.

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 siren must be pointed downward to avoid moisture collecting inside it and to enhance sound dispersal.

Wiring Connections: The security system's 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.

Wiring Connections - 5 Wire Connector

Black Wire - (Ground Input): The Black wire's function is to supply Negative chassis ground for the security system's operation.

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.

Note: 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 alarm 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.

Note: When power or ground is first applied the alarm will trigger "on" instantly.

Note: 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 - (Positive 12 Volt Input): The Red wire's function is to supply Constant Positive 12 Volts for security system's operation. When 12 Volts is first applied to the Red wire, the system will activate, sounding the siren, flashing the lights and locking the doors (if equipped with an optional doorlock interface). **Note:** In Valet Mode with the ignition switch "on", this function will not work, allowing vehicle to be serviced without the system being activated if the battery is disconnected and reconnected. The Red wire also supplies 12 Volt Positive to the built-in relay for flashing the parking lights.

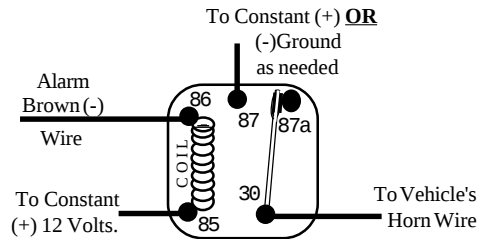
CONNECTION: Connect the Red wire to a Constant Positive 12 Volt source. This source should have Positive 12 Volt at all times and in all ignition key positions. Connection

automatically lock when the ignition switch is turned "on", nor automatically unlock when the ignition switch is turned "off".

5) 30 or 60 Second Activation Duration: Feature #5 will select the length of time that the siren sounds and the lights flash when the alarm is activated or triggered. This can be used when local law requires shorter siren times for noise restrictions. Pressing the small transmitter button when programming this Feature will select the 30 second timing cycle.

6) Double Pulse Door Unlock: If Feature #6 is "on" the alarm's unlock output will pulse twice to unlock some of the newer doorlocking systems.

7) Steady Siren Or Pulsed Horn Output: Instead of the included electronic siren, if preferred the vehicles existing horn may be used for the alarm's audible responses. If the vehicle does not utilize an existing horn relay, one must be added or this output's 1 Amp capacity may be exceeded, which will damage the alarm.



8) Horn Confirmation Honk Loud Or Soft: If the previous Feature is utilized, the arming and disarming confirmation honks may be adjusted with this Feature. When programming this Feature, pressing the large transmitter button will select a longer output

confirming that the alarm is fully armed. If a point of entry is reopened before the 30 seconds expires, the countdown stops, and will reset to start again when the door is reclosed.

Upon disarming an armed system, a 90 second Automatic Rearming countdown will start. During this countdown the LED will flash rapidly until any point of entry is opened, which will temporarily suspend the Automatic Rearming process until reclosed.

At the end of the 90 second period the alarm will automatically arm itself (note that the doors will also lock if Feature #2 is turned "on"). Automatic Rearming is cancelled by turning the ignition switch "on" before the 90 second countdown ends. To temporarily suspend either Last Door Arming or Automatic Rearming (for example, while refueling) the owner should put the alarm in Valet Mode or leave the door open. It is not recommend to leave the ignition switch turned "on" for this purpose.

2) Passive Locking and Automatic Relocking: If Feature #2 is turned "on", and the Last Door Arming Feature is utilized, the doors will also lock when the alarm becomes armed 30 seconds after shutting the last door and also lock the doors when the alarm rearms from Automatic Rearming.

3) Ignition On / Off to Lock / Unlock Doors: If Feature #3 is "on", the doors will lock 2 seconds after the ignition switch is turned "on", and unlock instantly when the ignition switch is turned "off".

4) Open Door Bypass to Feature #3: If feature #4 is "on" it will check the vehicle's door circuit. If it detects that any of the vehicle's doors are open at the time, the doors will not

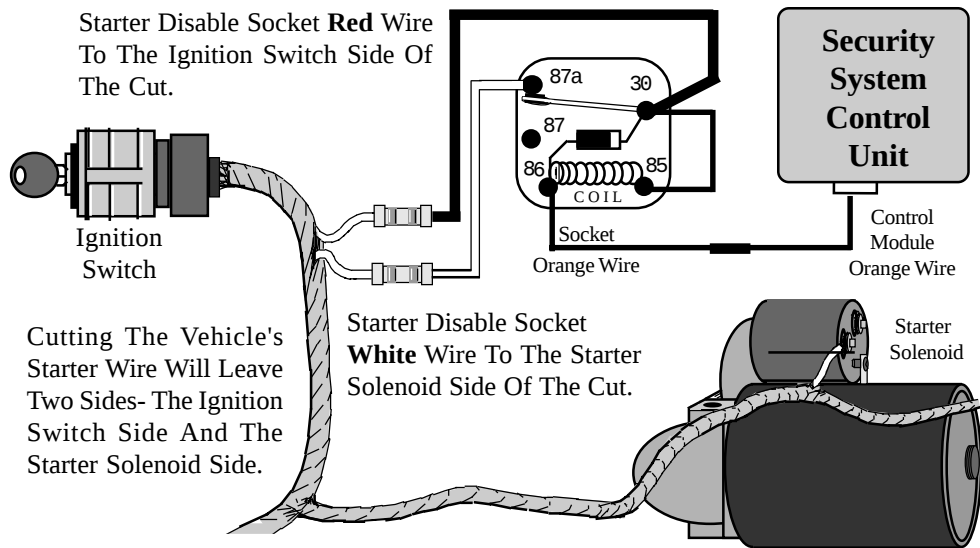
locations can be at the supply wire at the ignition switch, the supply wire *behind* the fuse block or the fuse/junction block. *Never* just insert the Red wire or any other security system wire behind a fuse. Also, please note that connecting directly to the battery's Positive terminal will expose this connection to failure due to a corrosive environment. The connection location must have at least a 15 Amp capacity.

Yellow Wire - (Ignition 12 Volt Positive 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 features.

CONNECTION: This wire supplies Positive 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 Positive 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.

Orange Wire - (Ground Output While Armed): The Orange wire is for an optional starter disable socket and relay. The function of this wire is to provide a Constant 500ma Ground Output whenever the security system is in an armed state. This output supplies Negative Ground to one side of the relay's coil. The other side of the relay coil will be supplied with Positive Voltage 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.



Configuring A Starter Disable Using The AU-SOCKET And One SPDT Relay.

- Step #6 Repeat steps 4 and #5 to enter another Feature number and program the "on" or "off" condition.
- Step #7 Turning "on" the ignition, or 10 seconds of no programming activity, will cause the system to automatically exit the Feature Programming Mode, which is indicated by two long siren chirps.

List Of 9 Programmable Features:

- Feature #1- Passive Arming and Automatic Rearming (Factory Setting Off).
- Feature #2- Passive Locking and Automatic Relocking (Factory Setting Off).
- Feature #3- Ignition On / Off to Lock / Unlock Doors (Factory Setting On).
- Feature #4- Open Door Bypass to Feature #3 (Factory Setting On).
- Feature #5- 30 or 60 Second Activation Duration (Factory Setting 60).
- Feature #6- Double Pulse Door Unlock (Factory Setting Off).
- Feature #7- Steady Siren Or Pulsed Horn Output (Factory Setting Steady Siren).
- Feature #8 -Horn Confirmation Honk Loud Or Soft (Factory Setting Soft).
- Feature #9 -Open Door Arming Alert (Factory Setting Off).

1) Passive Arming and Automatic Rearming: If Feature #1 is turned "on", the Last Door Arming and Automatic Rearming Features will operate. Last Door Arming starts after the ignition switch has been turned "off" and at the last open door is closed. The moment the last door closes the alarm will chirp and begin a countdown (during this countdown the LED Status Light will be flashing fast). Thirty seconds after the last door was closed, the siren will chirp again, the parking lights flash once, and the LED will begin to flash slow,

Programmable Features

Feature Programming Mode:

This Security System has 9 Features that can be turned on or off by accessing the Features Programming Mode. To change a Feature, follow these steps:

- Step #1: Turn "off" the ignition.
- Step #2: Within 7 seconds of turning "off" the ignition, press the Valet Switch 5 times.
- Step #3: The system is now in Features Programming Mode. To confirm, the siren will sound a short burst. For the next 10 seconds the system is ready for the desired Feature to be selected. The system will exit Features Programming Mode if a selection is not made within 10 seconds.
- Step #4: Within 10 seconds of entering Features Programming Mode, press the Valet Switch the number of times that equal the Feature number that is desired. After the series of Valet Switch presses, the siren will chirp an equal number of times to confirm that the correct Feature has been accessed for programming. Example: Press the Valet Switch 5 times, the siren will chirp 5 times.
- Step #5: Press the large transmitter button if the Feature is to be turned on; or press the small transmitter button if the Feature is to be turned off. The siren will chirp once to confirm that the Feature was turned on; or, chirp twice to confirm the Feature was turned off. Remember, 10 seconds without any programming activity will result in the system exiting the Features Programming Mode automatically.

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.

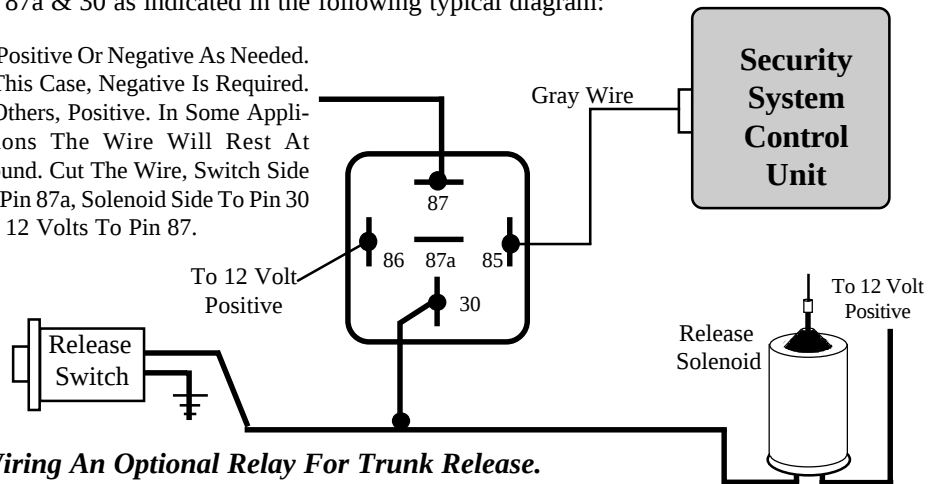
Connect the optional starter disable socket's Red wire to the ignition switch side, and its White wire to the starter solenoid side. Be sure that good, solid electrical connections are made as this generally is a high amperage circuit. Connect the security system's Orange wire to the Orange wire of the 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.

Gray Wire - (Negative Trunk Release Output): The function of the Gray wire is to provide an optional output, the primary use being trunk release. Press and hold the small transmitter button for two seconds to activate this output. When activated the siren will chirp twice and the Gray wire will provide a 250ma Negative Ground pulse for 1 second; or, stay grounded for as long as the small transmitter button is depressed, for up to 15 seconds.

Also, the security system will automatically disarm, unlock the doors and illuminate the

exterior lights on for 30 seconds (unless a door is opened or the ignition switch is turned "on"). **Note:** The trunk release feature can be operated anytime with the ignition switch "off", or, it may also be operated while ignition key is "on" provided a door is open at the same time. This prevents the trunk or rear hatch from being opened from the transmitter while driving. Unless the vehicle's trunk release switch negatively triggers a release relay which draws no more than 250ma, an optional relay must be used. Connect the Gray wire to relay pin (85), and connect Constant Positive 12 Volts to relay pin (86). Connect pins 87, 87a & 30 as indicated in the following typical diagram:

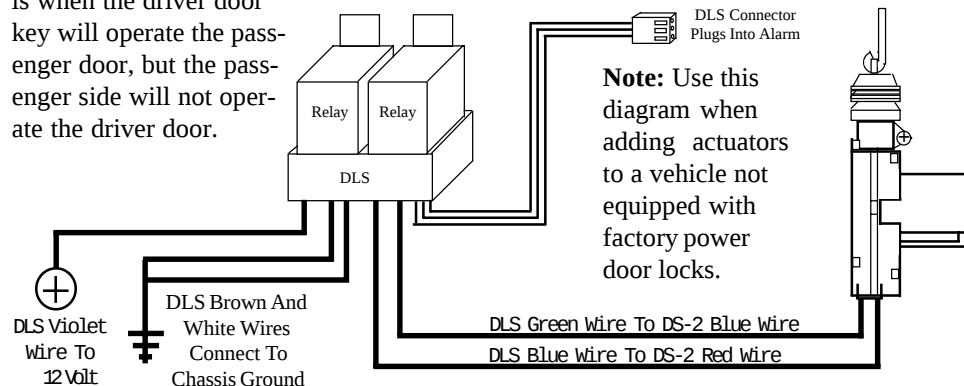
To Positive Or Negative As Needed.
In This Case, Negative Is Required.
In Others, Positive. In Some Applications The Wire Will Rest At Ground. Cut The Wire, Switch Side To Pin 87a, Solenoid Side To Pin 30 and 12 Volts To Pin 87.



Wiring An Optional Relay For Trunk Release.

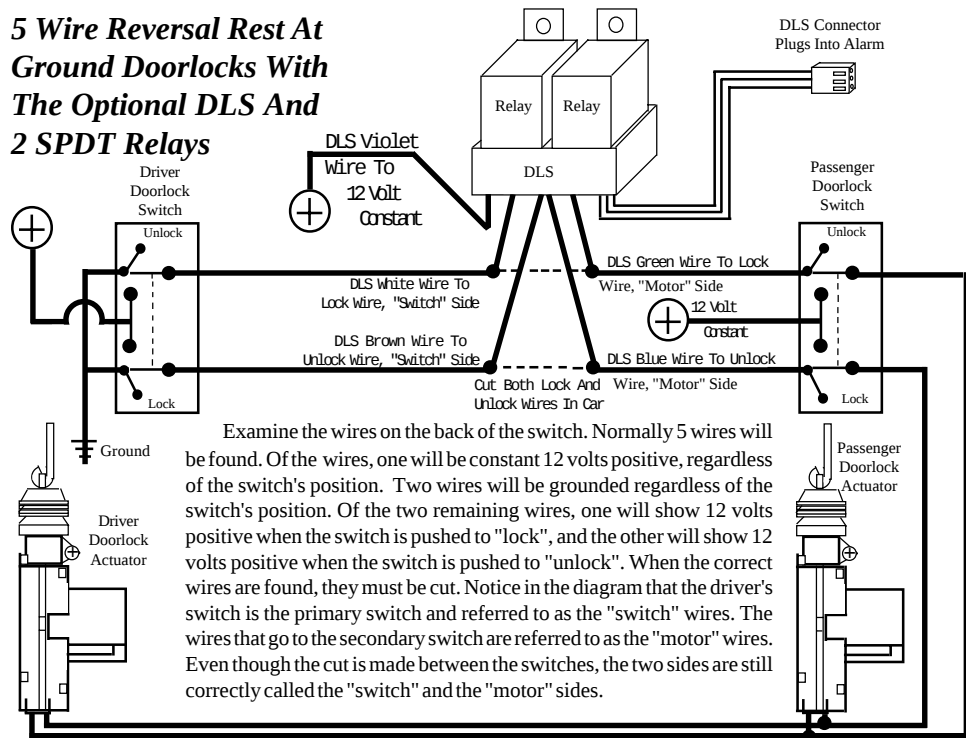
Adding The Optional DS-2 Actuator And The DLS And 2 Relays

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.



Note: Use this diagram when adding actuators to a vehicle not equipped with factory power door locks.

5 Wire Reversal Rest At Ground Doorlocks With The Optional DLS And 2 SPDT Relays



Wiring Connections - 7 Wire Connector

Brown Wire - (Negative Siren Output): The Brown wire is a 12 volt Negative output for the electronic siren. This circuit will have steady output to sound the siren if the alarm is activated, and pulses for the confirmation chirps. If desired, this output may be changed to pulse, allowing connection to the vehicle's existing horn. This Programmable Option is explained on Page 37.

CONNECTION: The Brown wire is connected directly to the siren's Black wire, and the siren's Red wire is connected to Positive 12 Volts.

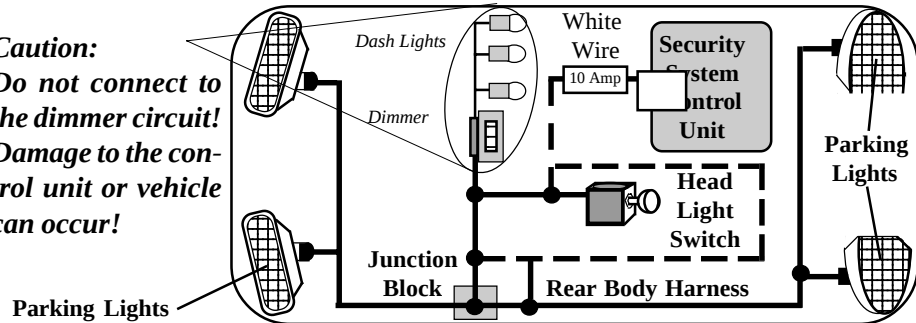
White Wire - Positive Flashing Light Output: This is a Positive 12 Volt output for exterior flashing light confirmation and to attract attention to the vehicle if the security system is activated. Also, upon disarming, this circuit will stay on for 30 seconds to confirm disarming and to illuminate the way to the vehicle. This feature gives added security when approaching the vehicle at night.

CONNECTION: Connect this wire to the vehicle's Positive 12 Volt parking light circuit. This wire 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. **Note:** Some vehicles, notably Toyotas, have a parking light relay which is triggered by a Negative Ground circuit from the headlight switch. These cars can still be connected directly to the White wire by finding the parking light circuit after the relay, usually at the Fuse/Junction Block.

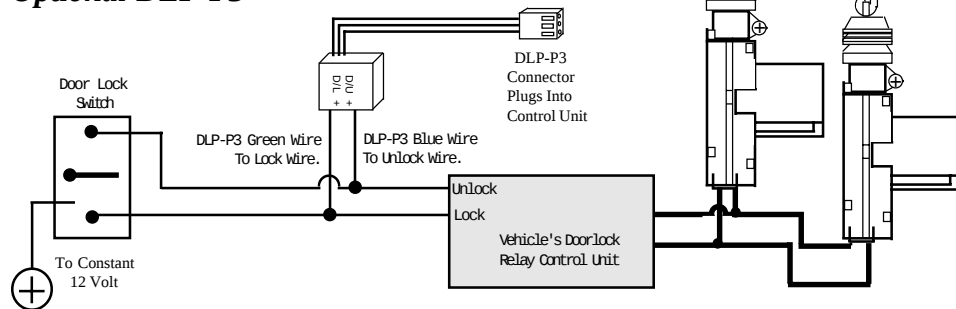
The correct wire will show Positive 12 Volts when the headlight switch is in the "Parking Light" and "Head Light" positions. When such a wire is located, be sure to also test that it is non-rheostated: while metering the wire, operate the dash light dimmer control. The correct wire will show no change in voltage when the dimmer is operated. **Note:** Do not attempt to flash the parking lights by connecting the White wire to a rheostated (dimmer) circuit! This will backfeed the parking lights through the rheostat or illumination control module, and possibly cause damage to the vehicle or alarm control unit. Also, if the White wire touches chassis ground, the Printed Circuit Board and on-board relay may be damaged.

3 Suggested Parking Light Connections

Caution:
Do not connect to the dimmer circuit!
Damage to the control unit or vehicle can occur!



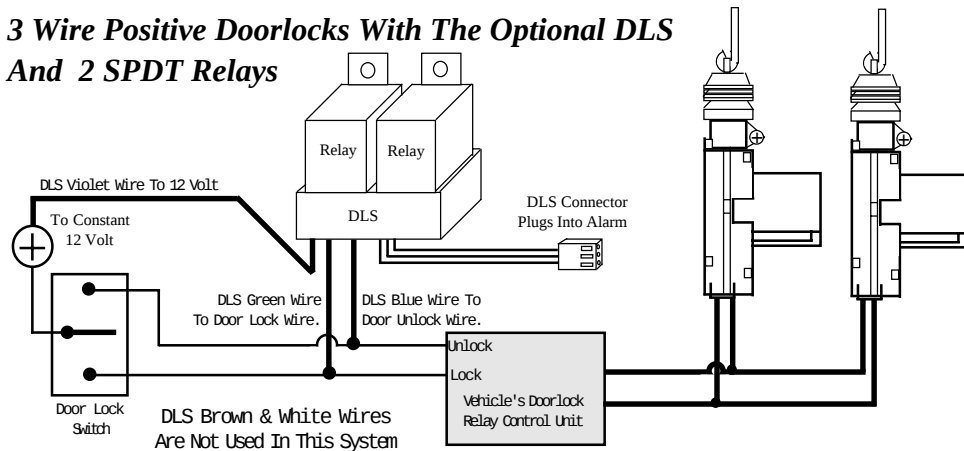
3 Wire Positive Doorlocks With The Optional DLP-P3



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 and 2 SPDT relays. The important thing to remember is that the wires in this system *rest at ground*, which means that the wires must be "opened", or cut, to make the connections.

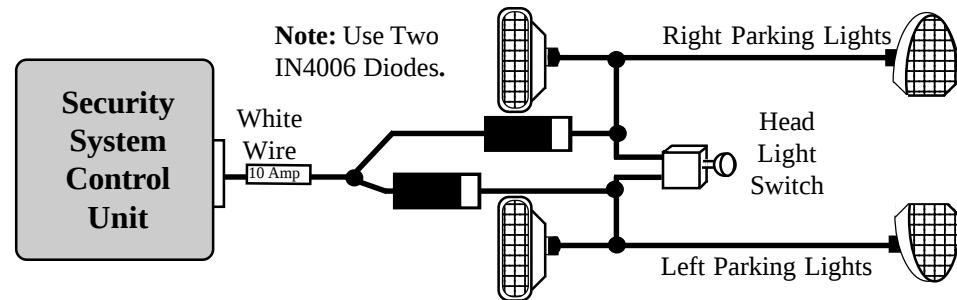
The DLS is a dual relay socket with a harness and connector to plug into the alarm control module and nonterminated wires to splice into the vehicle's wiring. The DLS and two relays are the most universal doorlock interface available. The relays used with it are standard 30 amp single pole, double throw (SPDT) automotive relays. The DLP-P3 is a plug-in transistor network which converts the alarm's negative doorlock output pulses to 12 volt positive pulses. The DLP-P3 is the quickest, easiest doorlock interface to use for 3 wire positive pulse doorlock systems. The option model DLS with 2 relays can also be used to interface the security system with 3 wire positive doorlock systems. Use this diagram:

3 Wire Positive Doorlocks With The Optional DLS And 2 SPDT Relays



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 circuit. **Note:** Flashing the headlights is not recommended. The halogen headlights found in modern vehicles are not designed to be rapidly turned on and off. 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 - one relay will supply the parking lights and the other relay will supply the headlights.

Connecting Left And Right Parking Lights Using Two Diodes.

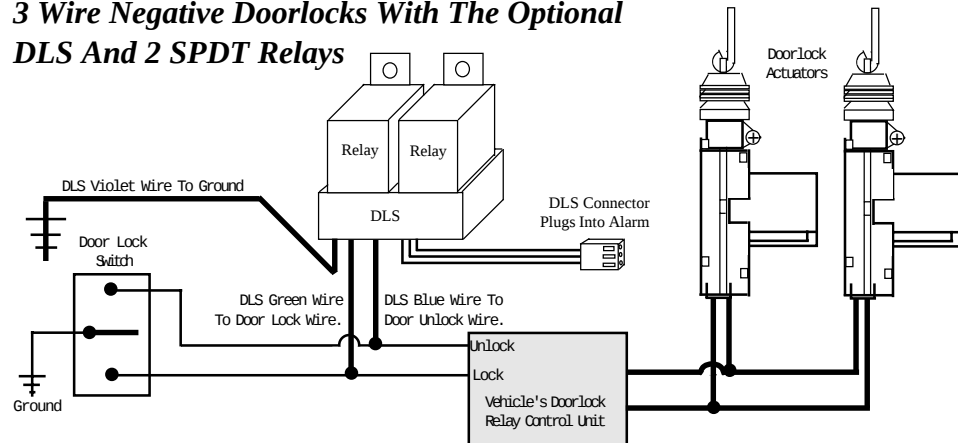


Green Wire - (Negative Door Trigger): The Green wire's function is an open door input to the control module for vehicles having *Negative switching* door pin switches. This circuit has effects on many security system operations, the primary being the activation of the system (sounding the siren and flashing the exterior and interior lights) if in an armed state. If the Last Door Arming and Automatic Rearming features are utilized, after turning "off" the ignition switch and closing the door, the Last Door Arming sequence will begin, and be suspended if a door is reopened. Opening a door during Automatic Rearming will also suspend that feature. **Note:** Last Door Arming and Automatic Rearming are related automatic arming features. Utilizing the Last Door Arming feature automatically turns on the Automatic Rearming feature.

Opening a door while the exterior lights are on after disarming the security system will cause the exterior lights to turn off 10 seconds after the opening of the door. If the system has been programmed to lock and unlock the doors with the ignition switch being turned "on" and "off", an open door bypass of this feature may also be programmed. If a door is opened while the ignition switch is "on", the trunk release via the transmitter will operate.

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. **Note:** 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. **Note:** If the car has a delay dome light the Circuit Bypass feature will allow the system to be armed from the transmitter instantly and will start

3 Wire Negative Doorlocks With The Optional DLS And 2 SPDT Relays



3 Wire Positive Pulse Systems: This power doorlock system is very similar to the 3 wire negative pulse system except the vehicle's doorlock switches use 12 volt positive pulses to operate the doorlock relays/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 is pushed to "lock", and the other will show 12 volt positive when the switch is pushed to "unlock".

in the form of adding a model DS-2 to each of the doors. This will allow the alarm only to operate the doorlocks. 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. The best way to identify a doorlock system is to examine the doorlock switch's wiring. The following pages will show schematic diagrams of the various power doorlock systems, and discuss them in more detail.

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.

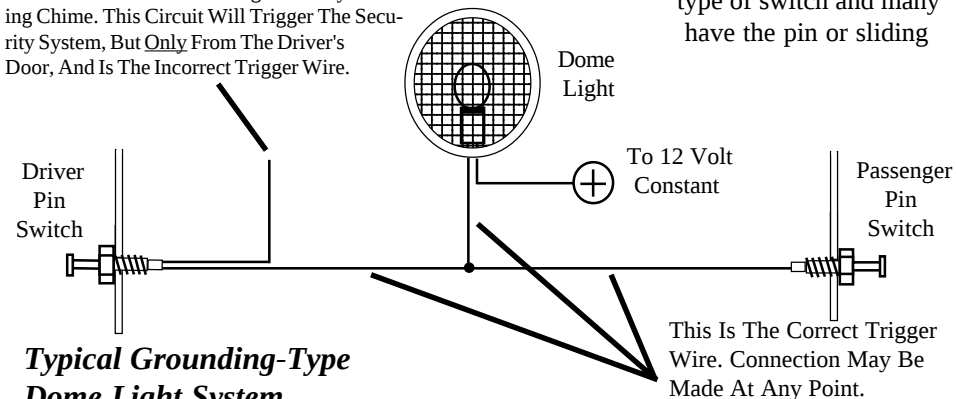
Most vehicles that have this type of power doorlock system may be wired direct, because all that's needed to operate the vehicle's relays is negative pulses. An optional harness is available (model DLP-N3), or the 3 pin connector and terminals that are included may be used. Some doorlock systems, however, 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.

protecting the Green wire circuit when the dome light turns off. In Last Door Arming mode, the system arms 30 seconds after the delay dome light turns off. The diagram below illustrates a basic negative courtesy light system.

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. If the switch is mounted in plastic, a constant ground wire will also be present. 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

Note: The Driver Pin Switch Often Will Have An Extra Wire That Goes To The Ignition Key Warning Chime. This Circuit Will Trigger The Security System, But Only From The Driver's Door, And Is The Incorrect Trigger Wire.

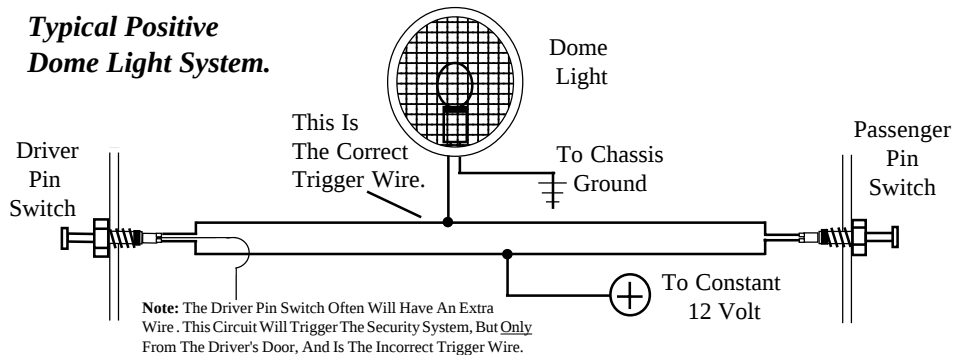


switches in the rear door jamb area. In addition, some vehicles utilize switches in the doors, either connected to the exterior door handles or to the latching mechanism. A car that features the dome lights illuminating when the exterior door handle is lifted is an example of this type of switching system.

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.

Violet Wire - (Positive Door Trigger): The Violet wire's functions are 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.

Typical Positive Dome Light System.



The sensor may be installed by using screws to mount directly to a panel in the vehicle, or a nylon tie-strap may be used to secure it to the steering column or other structural part of the vehicle. Route the harness and connector from the sensor to the alarm control module. Plug the sensor's connector into the alarm's White port marked "Aux. Plug". The FREE-300 sensor may be adjusted using a small screwdriver in each of the adjustments (one for Prewarning, the other for Instant Trigger). A LED indicator is present for each zone to assist in the adjustment of the sensor. The FREE-200 single-zone sensor has one adjustment.

Plug-In Pager Port: The security system features a plug-in port for an optional pager system. The 8-pin plug on the top corner of the system's Control Module will allow quick and easy installation of an Omega Pager unit. The Omega Pager unit will come with an adapter harness that plugs into this port. After all connections of the alarm are made simply plug the pager into this optional port. A coaxial jumper cable included with the Omega Pager will allow the vehicle's existing radio antenna to be used by the Pager. Complete instructions are included with the Omega Pager.

Plug-In Power Doorlock Interface Port:

The security system features a plug-in port for an optional doorlock interface. The 3 pin port on the alarm control module produces a negative pulse for lock, a constant 12 volt pin *for the optional relay coils only*, and a negative pulse for unlocking the doors. The doorlock interface needed will depend upon the type of power doorlocks the vehicle has. **Note:** If the vehicle does not have existing power doorlocks. Power doorlocks may be added to the vehicle

To turn off the Easy Valet™, Simply press the Easy Valet™ switch and instantly the system will be out of Valet Mode. To confirm that the Valet Mode is turned off, the LED Status Light will turn off. **Note:** The Easy Valet™ feature will only operate if the security system is in any condition other than armed.

Disarming The System If The Transmitter Is Lost: In the event the transmitter is lost, damaged, or its batteries become exhausted, the Easy Valet™ Switch and the ignition key can be used to disarm the security system:

STEP 1. With the system in the armed condition, enter via the driver's door (be aware that the security system will trigger the instant the door is opened).

STEP 2. Use the ignition key to turn "on" the ignition.

STEP 3. Within 10 seconds press the Easy Valet™ switch and the alarm will disarm.

NOTE: The Easy Valet™ switch is also part of the programming operations for programming features and transmitters. These operations are explained in detail on Pages 34-39.

Plug-In Shock Sensor: The security system features a plug-in port for an included Electronic Piezo Shock Sensor. This port supplies constant 12 volt, grounded output when the system is armed, a negative instant trigger, and a negative prewarn trigger. When the prewarn (optional on FREE-200, included on FREE-300) is triggered, the security system will respond by chirping the siren for two seconds and relocking the doors. After this circuit has been triggered 5 times it will automatically shut down until the alarm system is rearmed again. This will prevent the alarm from being a nuisance to the general public. Most Omega Research and Development, Inc. sensors will plug directly into the alarm control module.

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. The correct wire will show this change when any of the doors are opened. **Note:** If the car has a delay dome light the Circuit Bypass feature will allow the system to be armed from the transmitter instantly and will start protecting the Violet wire circuit when the dome light turns off. In Last Door Arming mode, the system arms 30 seconds after the dome light turns off.

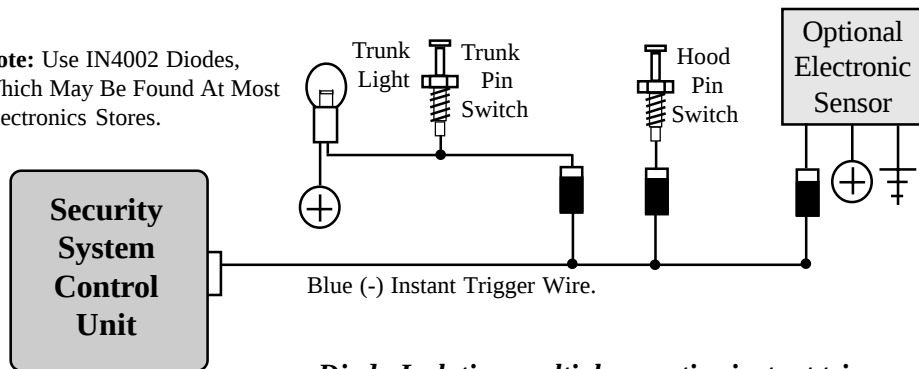
Blue Wire - Negative Instant Trigger: The Blue wire is a Negative instant trigger used primarily to detect entry into the hood or trunk area of a vehicle. The primary function of this circuit is to activate the security system (sounding the siren and flashing the exterior and interior lights) if in an armed state. If the Last Door Arming and Automatic Rearming features are utilized, after turning "off" the ignition switch and closing the door, the Last Door Arming sequence will begin, provided the Blue wire is not grounded. If the Blue wire is grounded during Automatic Rearming, the process will be interrupted. When the Last Door Arming feature is utilized, if the Blue wire is grounded when the last door is closed, the Last Door Arming process will not start until the Blue wire is ungrounded.

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 circuit 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 illuminate whenever the hood is raised. Also, diode-isolation is necessary when combining electronic sensors together, or, in the same circuit with pin switches:

Note: Use IN4002 Diodes, Which May Be Found At Most Electronics Stores.



Diode-Isolating multiple negative instant triggers

The Easy Valet™ Switch: Mount the Easy Valet™ switch in a hidden a location that is accessible to the driver. The Easy Valet™ Switch uses a double-sided adhesive pad for mounting. Be sure to clean the mounting area for good adhesion. A round adapter is included, which may be screwed to the mounting area to ensure adhesion. Although it is not absolutely necessary to mount the switch in a hidden location, because the ignition key is needed to disarm the alarm, a hidden switch makes it more difficult for a thief who has copied the ignition key. Route the wires to the system's control module, and insert the Blue connector into the Blue plug on the control module. **Note:** The system's valet circuit is designed so that a toggle type switch may also be used.

The function of the Easy Valet™ Switch is to keep the system from arming during extended stopovers for service stations, maintenance, valet parking, car washing, etc.; and, in conjunction with the ignition key, to disarm the system if the transmitter is lost or inoperable.

To turn on the Easy Valet™, simply press the Valet Switch for two seconds to activate the Valet Mode. The system will confirm it is in the Valet Mode by responding with two siren chirps, the LED Status Light coming on constant. The alarm will retain memory of the valet condition while the ignition is "on" or "off". While in the Valet Mode, the transmitters can still operate panic, doorlocks, trunk release; the doors will lock when the ignition switch is turned "on" and unlock when it is turned "off". **Note:** While the security system is in Valet Mode, every time the ignition switch is turned "off", the siren will chirp once as a reminder. **Note:** The Automatic Transmitter Verification feature will also operate when the ignition is turned "on" while the system in Valet Mode.

Zone Violation: If the system is triggered the LED Status Light will start to flash and pause the #9 through #12 sequences to indicate which protected circuit triggered the system. This is seen while the system is armed, and after disarming, until the ignition switch is turned "on", which will clear the security system's memory. The unit's memory can store four different codes, and if multiple violations involving different zones occurred, the different zones will be shown in the order of the violation.

- 9) Flash-2x & Pause = System was triggered from the hood or trunk circuit wire.
- 10) Flash-3x & Pause = System was triggered from the door circuit wire.
- 11) Flash-4x & Pause = System was triggered from the auxiliary sensor input.
- 12) Flash-5x & Pause = System was triggered from the auxiliary prewarn input.

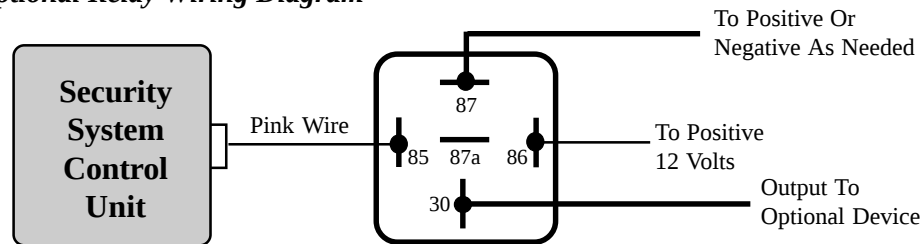
Zone Testing: Every time the ignition key is turned off, the LED Status Light will flash and pause the #13 through #16 code to indicate what protected circuit is in a triggered state. Example: Open a door and the LED Status Light will start flashing 3 times and pause until the door is closed, or, if another protected entry point is triggered while the door is still open, then the LED Status Light will indicate the most recent zone triggered.

- 13) Flash-2x & Pause = System is detecting a trigger from the Blue wire.
- 14) Flash-3x & Pause = System is detecting a trigger from the door circuit wire.
- 15) Flash-4x & Pause = System is detecting a trigger from the auxiliary sensor input.
- 16) Flash-5x & pause = System is detecting a trigger from the auxiliary prewarn input.

Pink Wire - 3rd Channel Output: The function of the Pink wire is to provide an optional output similar to the Gray trunk release wire. Press both transmitter buttons for two seconds to activate this output. Once activated, this output will last for one second, or, for as long as the transmitter buttons are held down, until the transmitter battery-saver feature turns the transmitter off. This feature can be used to activate other optional modules (Example: car starting equipment or power window roll up units).

CONNECTION: For most applications an optional relay will be needed (Use the following diagram). This output will not disarm the security system when activated.

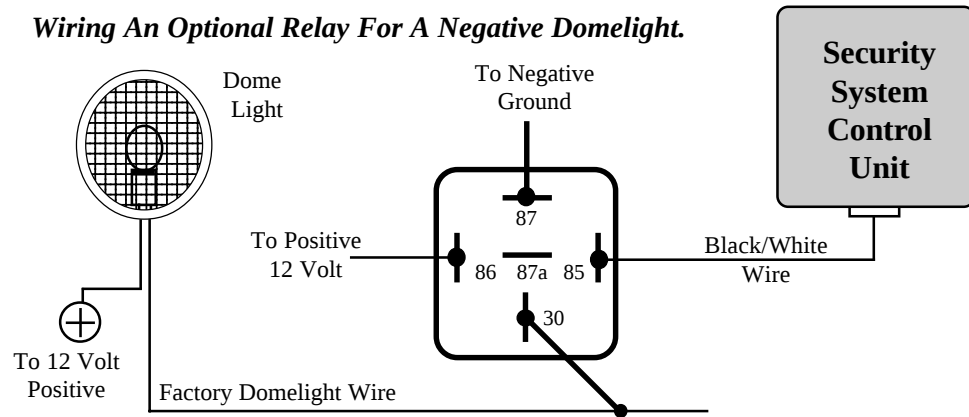
Optional Relay Wiring Diagram



Black/White Wire - Domelight Supervision Output:

The Black/White wire is intended, by configuring an optional SPDT relay, for domelight supervision. This feature will illuminate the interior lights of the vehicle upon disarm (and also duplicate the confirmation flashes). This output's operation is very similar to the White Parking Light Output wire. If required, this output may be used instead, in conjunction with the White wire, to operate European-style split parking lamp circuits.

Wiring An Optional Relay For A Negative Domelight.



Security System Status: The LED Status Light is a visual indicator of what state the security system is in at any given time. It is normally positioned in a location that is easily observed by the driver. There are 16 possible conditions that the system can be in, and are reflected by the LED Status Light:

- | | |
|------------------|--|
| 1) Off | = The system is disarmed and not performing any automatic functions. |
| 2) On Constant | = The system is in the Valet Mode. |
| 3) Flashing Slow | = The system is Fully Armed. |
| 4) Flashing Fast | = 30 second Last Door Arming or 90 second Automatic Rearming is in progress. |

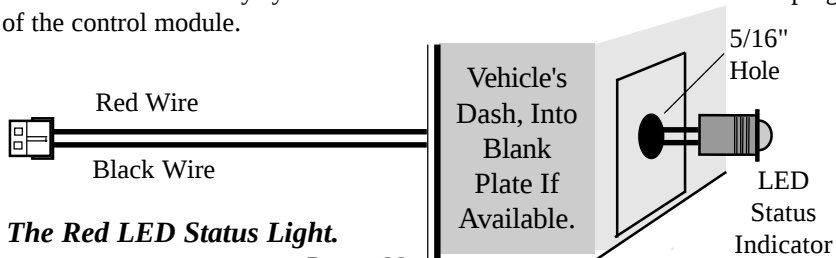
Automatic Transmitter Verification™ (Patent Pending): After the ignition is turned "on", the LED Status Light will flash to indicate the number of transmitters programmed to operate the security system. For example: two flashes and a pause indicates that only two transmitters are coded to operate the system. This feature works for a 10 second period every time the ignition switch is turned "on". Also, for eight hours after any transmitters have been coded to the system the siren will chirp for two seconds and the LED flashes 90 seconds.

5) Flash one time and pause	= 1 transmitter code is stored in the system's memory.
6) Flash two times and pause	= 2 transmitter codes are stored in the system's memory.
7) Flash three times and pause	= 3 transmitter codes are stored in the system's memory.
8) Flash four times and pause	= 4 transmitter codes are stored in the system's memory.

Prewired Plug-In Features

Red LED Status Light: Mount the Red LED Status Light in a location where it can easily be seen by the driver, and where it can be seen from outside, as the LED Status Light provides a level of visual deterrence. Good locations differ from vehicle to vehicle, but generally a spot on the driver side or optimally on the center of the dash will suffice.

When mounting, we suggest checking for a blank, or "dummy" plate, such as used to fill an opening where optional switches, accessories, etc. would normally be located. Drilling into a large, expensive to replace piece of the dash should be avoided. The correct size mounting hole is 5/16". Use a stepped drill bit, such as a Unibit, to drill the hole. This is the most accurate, safest way, to drill in steps until the hole is the proper size. If using a single-sized bit, use a 1/8", then a 1/4", then a 5/16" bit. This prevents the drilled material from cracking or splitting. **CAUTION!** Check behind the panel being drilled into for obstructions before drilling! Taping the bit will prevent excess penetration. After mounting, route the Red connector to security system control module and insert it into the Red plug on the side of the control module.



Mounting The Red LED Status Light.

CONNECTION: Connect the Black/White wire to an optional SPDT relay's pin #85. Relay pin #86 is connected to Positive 12 Volts, and pin #30 is connected to the vehicle's domelight wire. This connection may be made at the same point that Green or Violet Door Trigger wire is made. Relay pin #87 will be connected to 12 volts Positive (if the Violet Door Trigger wire is used), or Negative Ground (if the Green Door Trigger is used). The diagrams show both types.

