

CRIMESTOPPER

SP-402 & SP-502 Alarm Combo System

INSTALLATION HANDBOOK:

INTRODUCTION

Congratulations on your choice of a Crimestopper combination alarm & remote engine starter with Data Port Technology

This installation book is designed for the installer or individual with an existing understanding of automotive electrical systems, along with the ability to test and connect wires for proper operation. To ease installation, we suggest that you READ THIS MANUAL before beginning your installation. This book is provided as a GENERAL GUIDELINE and the information contained herein may differ from your vehicle.

DISCLAIMER:

Crimestopper Security Products, Inc. and its vendors shall not be liable for any accident resulting from the use of this product. This system is designed to be professionally installed into a vehicle in which all systems and associated components are in perfect working condition.

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This device complies with FCC Rules part 15. Operation is subject to the following two conditions: 1) This device may not cause interference, and (2) this device must accept any interference that may be received, including interference that may cause undesired operation. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. Such modification could void the user's authority to operate the equipment.

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PRE-INSTALLATION CONSIDERATIONS

BEFORE BEGINNING, check all vehicle manufacturer cautions and warnings regarding electrical service (AIR BAGS, ABS BRAKES, ENGINE / BODY COMPUTER AND BATTERY).

PLAN OUT YOUR INSTALLATION. You should pre-determine the location of the Control Module (Brain), Valet button, LED, and Siren locations. This will save time and ease the installation process.

USE VOLT/OHM METER to test and locate all connections. Test Lights or Lighted Probes could possibly damage a vehicle's computer system or cause an airbag to deploy.

ADDITIONAL PARTS, that are not included with this unit, may be needed for your particular vehicle. These items may include extra relays, Door Lock Interface Modules, or Transponder Override modules.

CAUTIONS & WARNINGS

DAMAGE RESULTING FROM IMPROPER INSTALLATION IS NOT COVERED UNDER WARRANTY!!

DO NOT remote start your vehicle in a closed garage. Make sure that the garage door is open or there is adequate ventilation. Failure to observe this rule could result in injury or death from poisonous Carbon Monoxide fumes.

DO NOT ROUTE ANY WIRING THAT MAY BECOME ENTANGLED with the brake/gas pedals, steering column, or any other moving parts in the vehicle.

REMOVE MAIN SYSTEM FUSE(S) before jump-starting the vehicle or charging the battery at high boost. **DAMAGE MAY OCCUR TO SYSTEM IF PROPER PRECAUTIONS ARE NOT OBSERVED.**

DO NOT exceed the rated output current of any circuit on the Remote start module. Failure to observe this warning will result in damage to the unit. Output currents are listed where applicable throughout this manual.

DO NOT extend the Remote start ignition harness length. Mount the module so that main harness reaches all ignition switch wiring. Extending these wires could result in poor performance.

COMPONENT MOUNTING

CONTROL MODULE: The alarm control module should be mounted in a concealed location. **DO NOT** mount the control unit in the engine compartment. Fasten the module to a bracket or wire harness using the cable ties provided.

SIREN MOUNTING: Mount the siren under the hood to fender-well or other body surface with the open end facing downward. Run the red siren wire through the firewall using a rubber grommet. Ground the black wire to the body metal near the siren.

LED: Mount the Blue LED in a visible location on the dashboard or console.

SHOCK SENSOR: Mount the included shock sensor with wire ties to an under dash wire harness or fasten with screws to firewall or side paneling.

OVERRIDE/PROGRAM/VALET BUTTON: Mount the Override/Program push-button in a hidden but accessible location. This button is required for emergency disarm, programming, and valet mode.

WIRING: 12-PIN Connector

BLACK: Chassis Ground

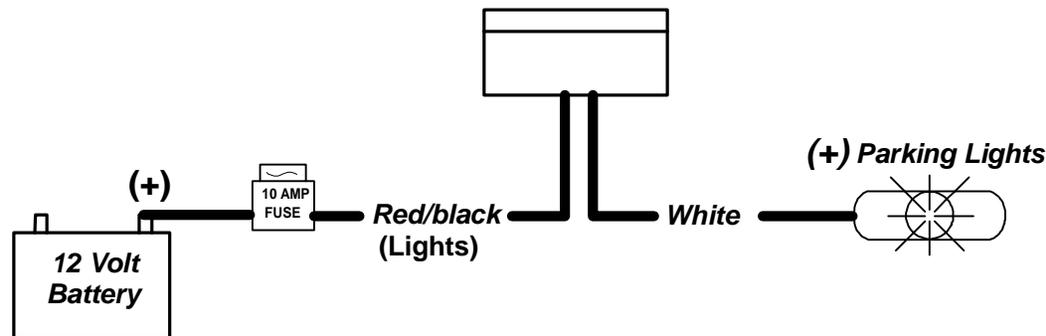
Connect to body metal of the vehicle using a sheet metal screw and a star washer to ensure a good ground. Keep the Ground wire short. Scrape away paint or debris from ground location.

WHITE: PARKING LIGHT OUTPUT

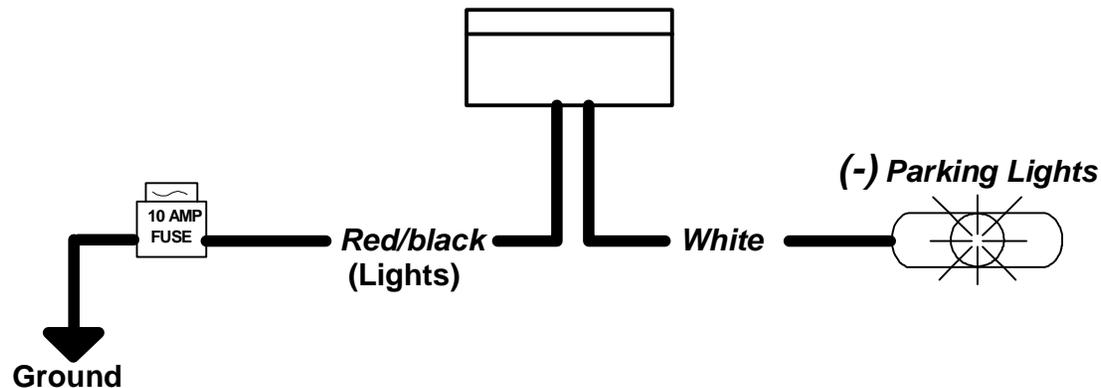
RED/BLACK: Input Source, 12 Volts or Ground

The Parking Light circuit can be connected up as a high current positive or negative trigger. Connect to vehicle parking light circuit at the back of light switch or if this is not possible, connect directly to one of the parking lights at the front of the vehicle. If your vehicle has a multiplex lighting system, that will require a resistor connected in series with the white wire to the light switch. Use the Negative parking light circuit for Multiplex resistor lights.

Positive Parking Lights



Negative Parking Lights



WIRING: 12-PIN Connector Cont.

BROWN: (+) Siren Output

Connect brown wire to siren red wire. Connect black wire of siren to chassis ground (body metal).

BROWN/WHITE: (-) 500mA Horn Honk Output (Optional, may require a relay)

Connect to the Negative Horn Trigger wire usually located near the steering column. If the vehicle horn circuit requires +12V, a relay is required. RELAY WIRING: Connect the Brown/White wire to terminal 85, connect relay terminals 86 and 87 to +12V constant power. Connect terminal 30 of the relay to the +12V positive device/circuit to be activated.

BLACK/WHITE: (-) 500mA Dome Light Illumination Output (Optional, Requires relay)

Negative Dome Light System: Connects to terminal 85 of a relay. Connect terminal 86 to +12V Constant. Connect terminal 87 to Chassis Ground. Connect Terminal 30 to the Negative dome light activation circuit.

Positive Dome Light System: Connects to terminal 85 of a relay. Connect terminals 86 & 87 to +12V Constant. Connect terminal 30 to the Positive dome light activation circuit.

YELLOW/BLACK: (-) 500mA OEM Rearm Output

This wire provides a ground pulse to rearm the vehicles' FACTORY anti-theft system after a timed-out or aborted remote start. Connect this wire to the vehicles' anti-theft rearm wire or to the door pin circuit depending on your requirements. This wire may be needed to pulse the door pin circuit on vehicles with retained accessory power.

ORANGE/BLACK: (-) 500mA OEM Disarm Output

This wire provides a Ground pulse to disarm the vehicles Factory Anti-Theft System prior to a Remote Start. Connect this wire to the vehicles' anti-theft disarm wire. This wire is sometimes found coming off the Driver's door key switch or at the Factory Anti-theft control module.

WHITE/RED: Tachometer Input

When installing this system in TACH REFERENCE mode, this wire must be connected to a valid source of AC voltage. This wire allows the unit to sense the engine running. See Tach Section on Page 15-17 for more information.

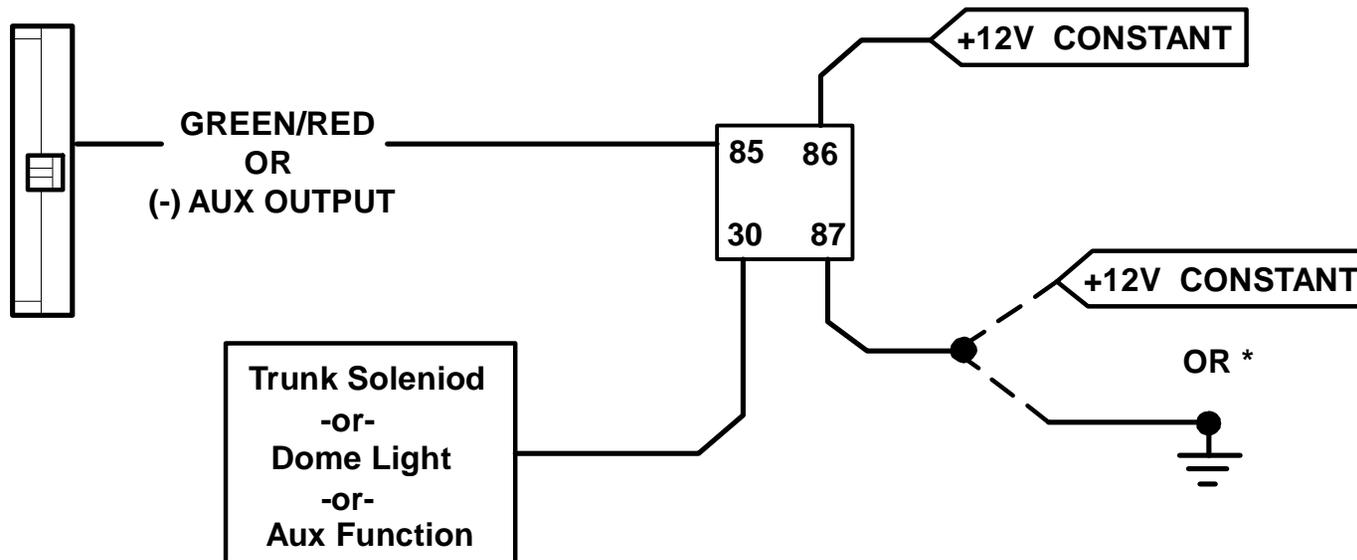
WIRING: 12-PIN Connector Cont.

GREEN/RED: (-) 500mA Remote Aux. Output 1 (Programmable Option #10, requires relay)

This is a programmable output that can operate two different ways:

- 1- **Trunk Pop with disarm = Default.** Provides a ½ second (-) Negative pulse when the Trunk button is pressed to open a Factory power trunk or hatch release.
- 2- **Remote Auxiliary Output without disarm.**

NEGATIVE AUXILIARY OUTPUT



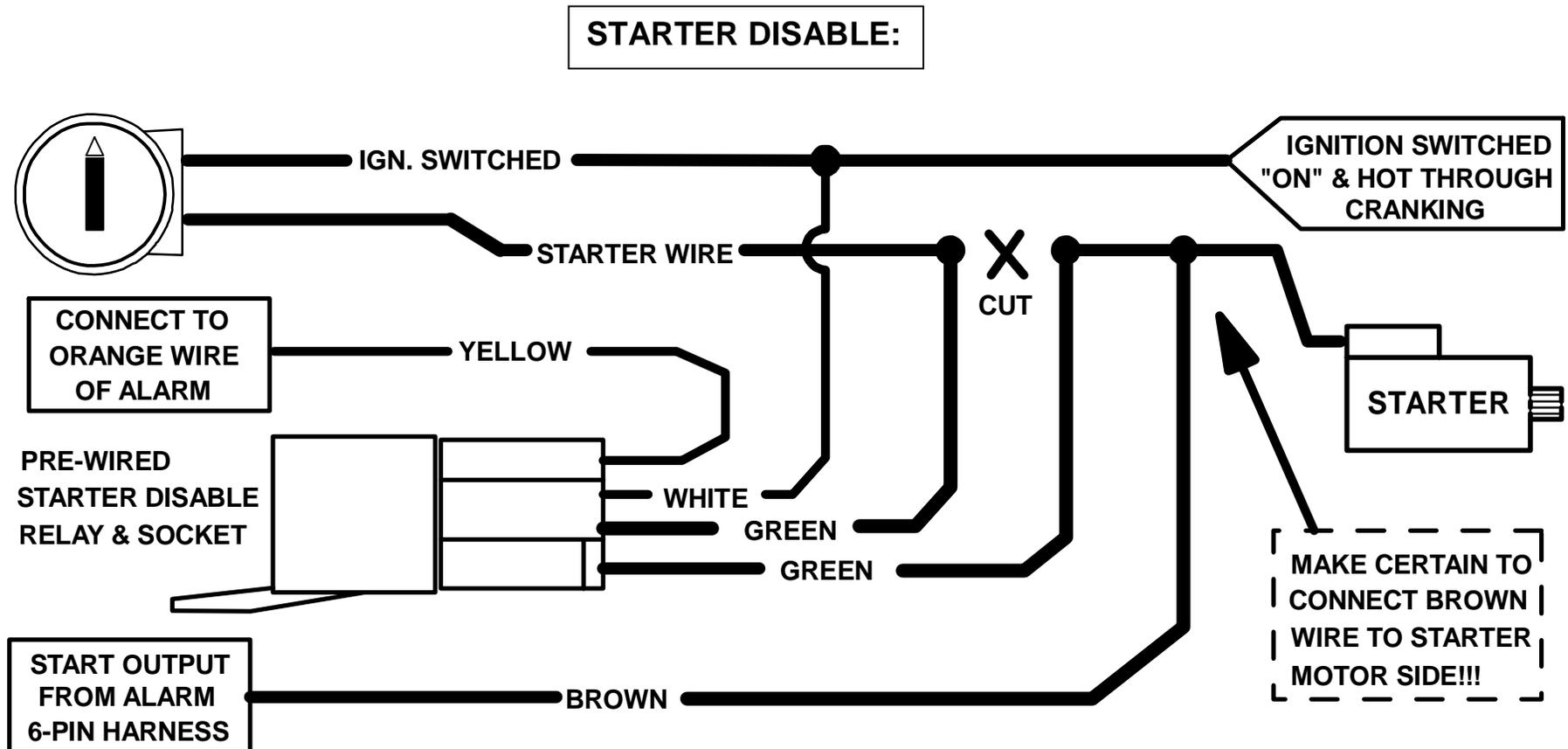
BLUE/WHITE: (-) Passenger Door Unlock Output (Optional, requires relay)

This wire activates when the unlock button on the remote is pressed a second time within 15 seconds upon disarming. This wire is used for the Optional Separate Driver's/Passenger Unlock feature. Connects to unlock circuit for passenger door or doors. See DOOR LOCK WIRING for special configuration options (pages 13-15).

WIRING: 12-PIN Connector Cont.

ORANGE: (-) 500mA Starter Disable/Anti-Grind Output

This wire should be connected to the Yellow wire of the pre-wired relay socket for the starter disable. Connect the White wire of the relay socket to the Ignition switched wire on the vehicle. Cut the vehicle starter wire and connect each half to a Green wire on the relay socket. This output also turns on with remote start to function as an "Anti Grind" wire to prevent the starter from grinding if you get in your car and turn the key too far after it was remote started.



WIRING: 7-PIN Connector (Trigger Inputs)

GRAY: (-) Hood Trigger Input – Zone # 3

Input trigger for a grounding hood pin switch. This input will trigger zone #3 of alarm and prevent remote start from engaging. Connect to an existing hood pin switch that read ground when open. If no existing switches are available, install new pin switches if desired. Note: DO NOT mount new pin switches in water pathways.

BLUE: (-) Trunk Pin Switch Input – Zone # 5

Input trigger for a grounding trunk pin switch. This input will trigger zone #5 of alarm. Connect to existing trunk pin switches that read ground when open. If no existing switches are available, install new pin switches if desired. Note: DO NOT mount new pin switches in water pathways.

GREEN: (-) Door Pin Switch Input – Zone # 2

Identify the wire that reads ground when any door is open and 12 volts when all doors are closed. Some vehicles may have isolated door triggers. In this case you may need to run additional wires from other doors or go directly to the wire that triggers the vehicle's interior dome light. Sometimes newer vehicles contain a separate body control module (BCM) where the door trigger circuit can be located. Most vehicles will NOT require the use of BOTH Green and Violet door trigger wires.

PURPLE: (+) Door Pin Switch Input – Zone # 2

Same as the GREEN wire below except this wire is used for vehicles that show a positive voltage (+12 volts) when the door is open and a ground when doors are closed as in many Ford, Lincoln, and Mercury vehicles.

BLACK/WHITE: Programmable – Start Activation or Hand Brake (Manual Transmission)

1. **(-) Start Activation Input:** This wire allows an outside source or accessory to activate a Remote Start. A momentary ground pulse on this wire will trigger a remote start. Examples would be a GPS Tracker or Smart Phone interface. **Default = Start Activation**
2. **(-) Hand Brake:** In manual Transmission Mode this wire must be connected to the hand brake for remote starting. See manual transmission mode.

WHITE: (+12V) Brake Reset

Connect the White wire to the side of brake pedal switch that shows +12 volts ONLY when pedal is depressed. This will turn off the remote start if someone attempts to drive the car without the keys or if the Ignition key is not turned on all the way.

WIRING: 7-PIN Connector Cont.

PINK: (-) Diesel Glow Plug Input or Passive Carjack Input

GLOW PLUG INPUT: Diesel Vehicles Only (Option # 23)

There are 2 ways of configuring the **Wait to Start** circuit for Diesel vehicles.

1. Use the Pink wire to monitor the wait to start circuit of vehicle. Connect the Pink wire to vehicle's wait to start circuit that shows a (-) Signal while the "WAIT TO START LAMP" is on. When this wire is used, the system will wait until light turns off before engaging the starter.
2. Use option 23 to control the wait to start circuit (pink wire not used). Most new vehicles have a computer controlled wait to start circuit. There is no wait to start wire, only an indicator light on the dash that is not accessible. These vehicles require a fixed time delay for remote starting. Selections are 10, 15 & 20 seconds, or Monitor Pink Wire (Default).

PASSIVE CARJACK TRIGGER (Option # 32)

To use Carjack protection requires selecting Option 32-1. This changes the Pink wire to Carjack Mode. You must connect the pink wire to a toggle switch or momentary switch to use Carjack protection.

Momentary Switch: To Activate Carjack, the button must be pressed after the ignition turns on. Least protection

Toggle Switch: Leave switch on for full time Carjack protection.

Connect the (-) Pink wire to a toggle switch or momentary push button depending on your level of Carjack protection. When the pink wire is grounded with the ignition on, Carjack is armed. If a door is opened then closed with ignition on, the Carjack Countdown will begin. After 1 minute, Carjack will trigger a full alarm.

To Reset Carjack During Countdown: Press the UNLOCK button on the remote control, Carjack will reset and the LED will stop flashing.

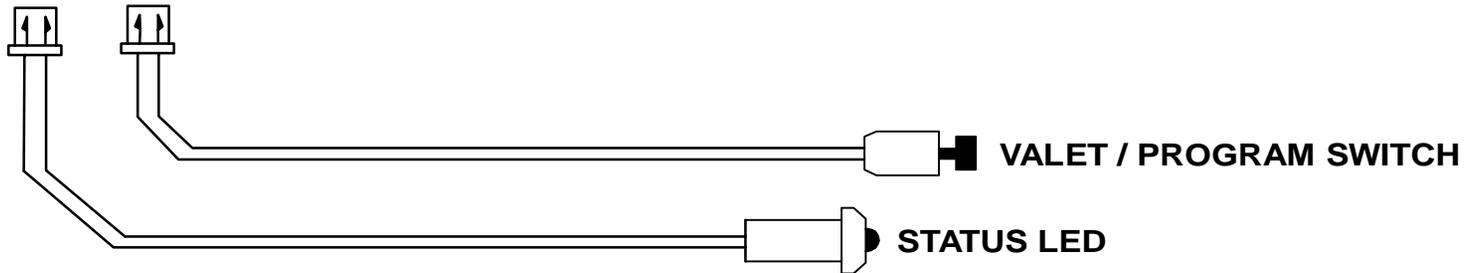
To Reset Carjack after Trigger: With the ignition key on, press and hold the override button for at least 5 seconds.

Note: Carjack does not work in Valet Mode or while vehicle is Remote Started.

WIRING: 2-PIN LED / 2-PIN Program-Valet Button (22 gauge wires)

Mount the Status LED in a visible location on the Dash or Console. Connect the small 2-pin plug from the LED to the control module. Note: Connectors are designed so that they will only plug into their appropriate slots.

Mount the Valet/Program/Override button in a suitable location. Connect the 2-pin plug from the Switch to the control module. Note: Connectors are designed so that they will only plug into their appropriate slots.



WIRING 4 PIN OUTPUT CONNECTOR

BLUE/BLACK: (-) 500mA Ground When Running or Remote AUX #2 (Programmable Option #17)

This is a programmable output that can operate 2 different ways.

- 1- Ground when Running = Default.** This is used for Remote Start when connecting factory Security Bypass modules or when an additional external Ignition Relay is required for your installation.
- 2- AUX 2 Remote Output** - This wire can be programmed to function as Auxiliary Channel #2 output. This output stays on as long as the button is held down. Connect to the Negative activation circuit of an auxiliary module or device.

BLUE/ORANGE: (-) STARTER Output

This wire provides a ground output for vehicle that requires a third starter wire to remote start.

VIOLET/WHITE: (-) ACC or AUX. 3 (Default = ACC)

The Violet/White wire is selectable for ACC, Momentary Pulse, Timed or Latched output, depending on option used. Option #27 and 28 controls these functions.

GREEN/WHITE: (-) IGN or AUX. 4 (Default = IGN)

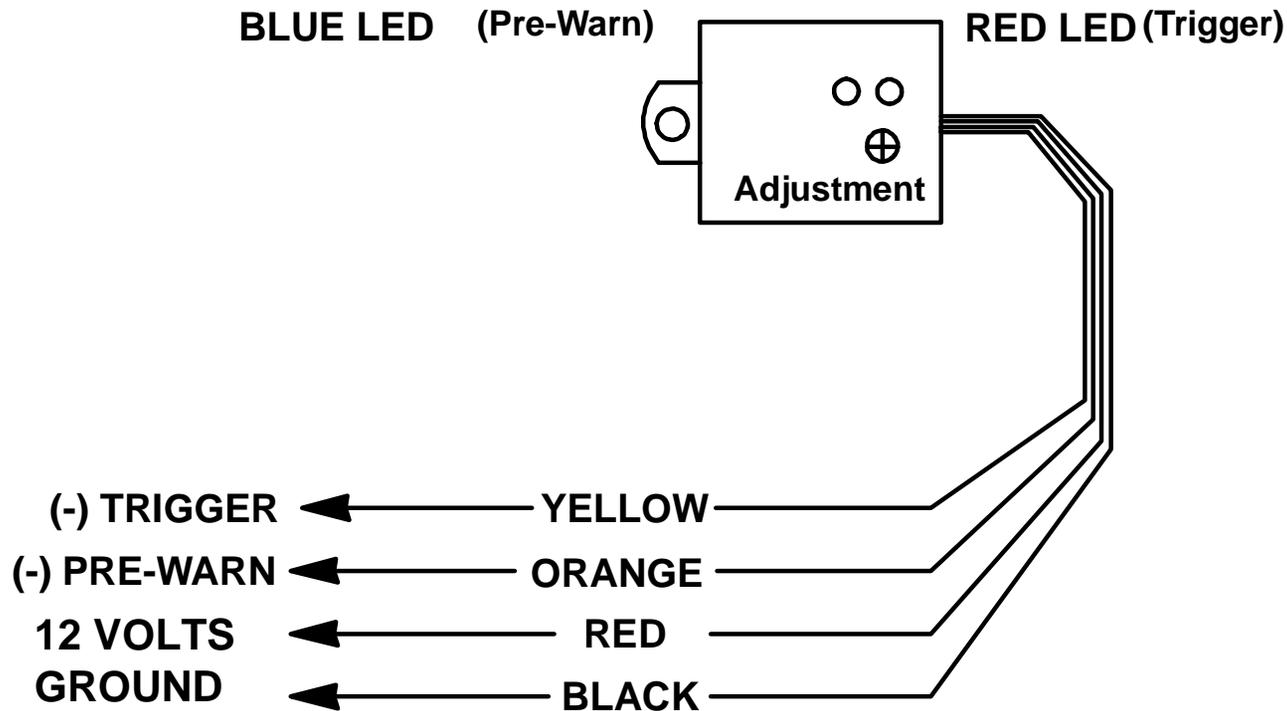
The Green/White wire is selectable for IGN, Momentary Pulse, Timed or Latched output, depending on option used. Option #29 and 30 controls these functions.

WIRING: 4-PIN Shock Sensor (22 Gauge wires)

SHOCK SENSOR: The sensor supplied with this system does not require any additional wiring. Simply mount the sensor in a suitable location, plug it in, and adjust the sensitivity. There are 2 LED's on the shock sensor to assist you in adjusting sensitivity. The Blue LED indicates the "Warn Away" level and the Red LED indicates a full alarm shock sensor violation.

NOTE: Your sensor may have 1 or 2 adjustment knobs (depending on model) to adjust both Pre-Warn and alarm trigger.

SHOCK SENSOR



POWER DOOR LOCKS: WIRING & SYSTEM TYPES

PIN 1: BLUE: (-) Negative pulse for UNLOCK

PIN 2: RED: 12V When using external relays (TERM 86)

PIN 3: GREEN: (-) Negative pulse for LOCK

DETERMINING DOOR LOCK TYPE: We recommend determining the type of locking system the vehicle has before connecting any wires. Incorrect connection may result in damage to the alarm and/or vehicle locking system.

Door lock information is provided as a guide. Your vehicle may be different.

Crimestopper Door Lock Accessories:

CS-6600DLM: Dual-relay plug-in module for Reverse Polarity, Positive, or Aftermarket Motors.

CS-6500DLI: Plug-in pulse inverter that converts the Negative outputs of the system to Positive type for Positive Door Lock systems.

CS-610S1: Aftermarket door lock actuator (motor).

Negative Trigger (-): Many Imports; Late model Ford & General Motors

Negative trigger door lock systems send a Negative (Ground) pulse to existing factory relays to lock and unlock the vehicle doors.

Positive Trigger (+): Many General Motors; Chrysler / Dodge / Plymouth

Positive trigger door lock systems send a Positive (12V) pulse to existing factory relays to lock and unlock the vehicle doors.

Reverse Polarity: Many Ford/Lincoln/Mercury/Dodge/Chrysler/Plymouth and early 90's GM Trucks

Reverse Polarity systems use no relays, but instead the door lock/unlock motors are controlled directly from the lock and unlock switches in the door. The lock and unlock wires rest at Negative Ground when not in use. When the lock or unlock button is pressed, one of the circuits is "Lifted" and replaced with +12V causing a lock or unlock to occur.

Single Wire (Dual Voltage): Late model Chrysler/Dodge/Plymouth Vehicles, some 2000-UP GM

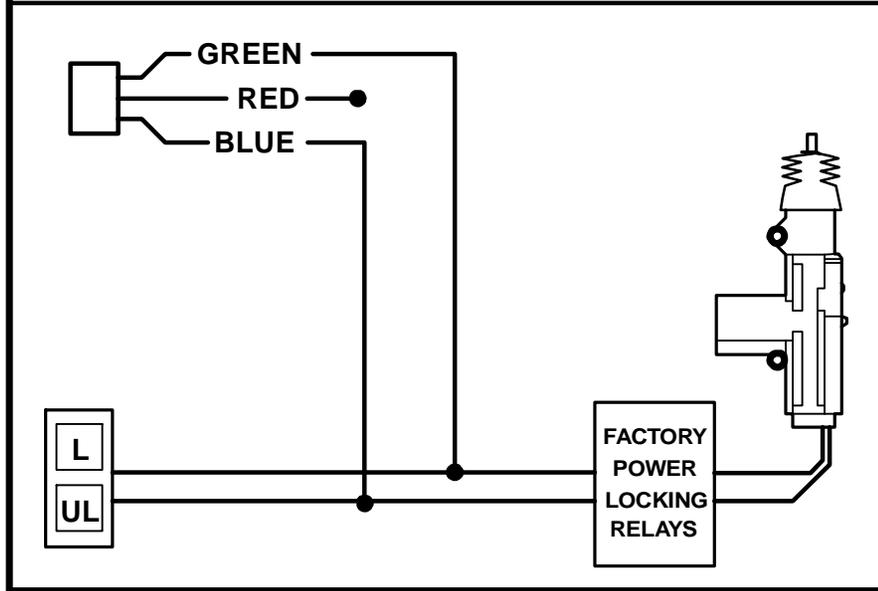
Dual Voltage systems have lock/unlock switches that send varying levels of Positive voltage OR Negative ground current to the SAME wire for both lock and unlock. When the vehicle's Body Computer Module (BCM) or door lock module senses different voltages on this wire, the system will either lock or unlock. Single wire door lock systems require relays and resistors.

Databus and Canbus Systems (Data Module Required)

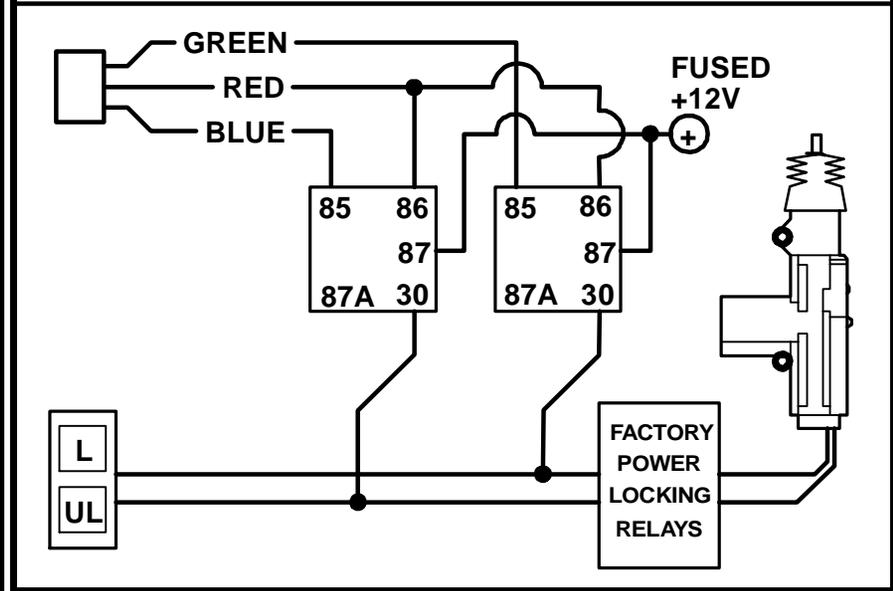
Databus systems send low current "Data messages" to the door lock controllers on a network in order to lock and unlock the vehicle. To install aftermarket systems in these vehicles, an interface module is required that converts the regular lock/unlock pulses into "Data messages" to allow locking & unlocking. Interface modules are sold separately.

DOOR LOCK WIRING

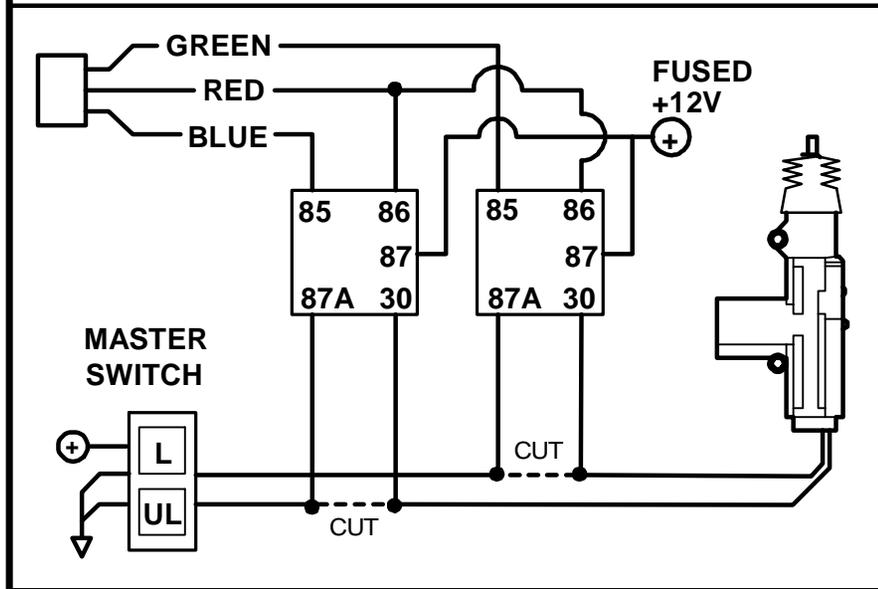
NEGATIVE TRIGGER DOORLOCK WIRING



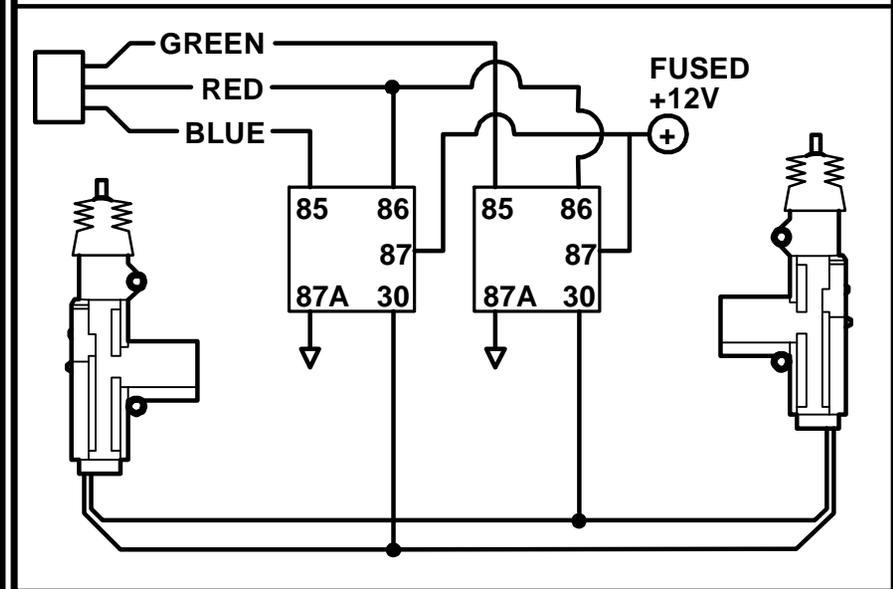
POSITIVE TRIGGER DOORLOCK WIRING



REVERSE POLARITY DOOR LOCK WIRING

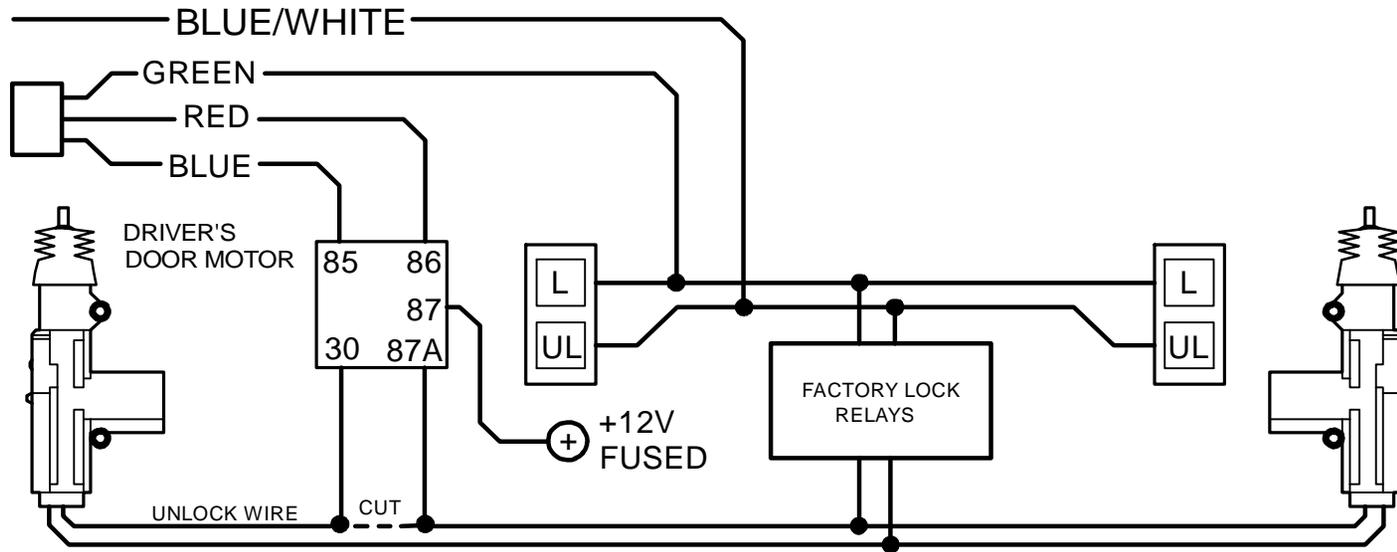


AFTERMARKET MOTOR/DOOR LOCK WIRING

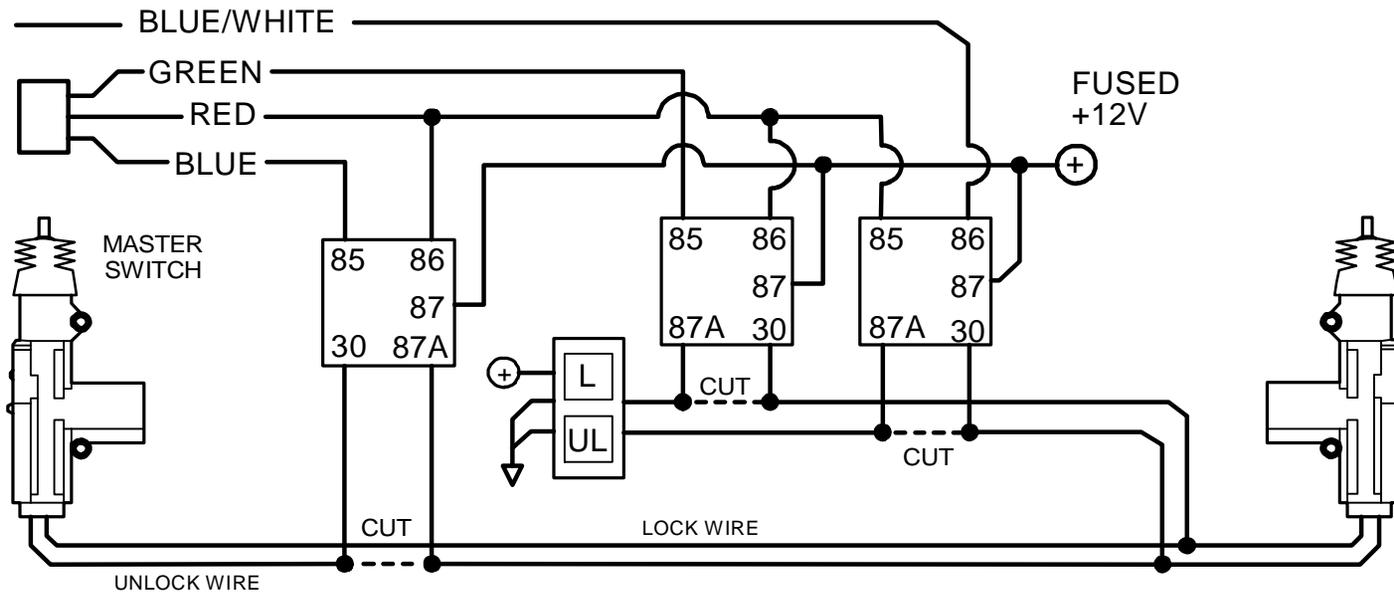


SEPARATE DRIVER'S DOOR UNLOCK WIRING

NEGATIVE TRIGGER DOOR LOCKS



WIRING FOR REVERSE POLARITY DOOR LOCKS



TACHLESS MODE

Your system includes a Tach-less mode that actively monitors and compares the vehicle's resting voltage versus its running voltage each time a remote start is performed; [instead of the conventional tach-pulse method]. Smart Tachless mode adjusts automatically to maintain optimum efficiency over the life of the installation.

IMPORTANT NOTES:

On the rare occasion that Tachless mode does not operate satisfactorily, change the voltage reference level as described below, or use a different mode such as "Tach Reference" mode, or "Timed Crank" mode.

TACHLESS ADJUSTMENT:

In the event Tachless over-cranks or under-cranks your starter, the settings can be changed. The purpose of adjusting the "Smart Tachless" Mode is to raise or lower the voltage reference threshold from the 93% default point. Raising or lowering this 93% point should increase or decrease your cranking time respectively. You can adjust the range from 79% to 100% in one percent increments. Factory default setting [starting point] is in the middle at 93% which should work for most vehicles. If you feel you need to fine tune the Tachless mode, then follow the steps below to adjust its reference level.

1. Open hood (or ground the Blue hood pin wire if no hood pin is installed)
2. Turn the key to the ON position (do not start vehicle).
3. Press program button 5 times, after a few seconds the unit will flash the lights 5 times.
4. Carefully press the program button 24 times to get to option # 24. You must get a light flash after each press. If the lights didn't flash, then the unit did not register your button press. Only count the light flash.
5. Press the Lock Button #1 on the remote to decrease by 1% (lights will flash 1X for each press); Press the Trunk Button #3 to increase by 1% (lights will flash 2X for each press); Press the Unlock Button #2 to reset to 93% (lights will flash 3X). The unit will stop providing light flashes when you reach the bottom (79%) or the top (100%) of the adjustment range. If you lost track, then just press Button #3 to reset back to 93% and begin again.
6. Turn Ignition OFF, Close hood (or un-ground the Blue wire) and check operation.

Note: The minimum starter crank time is 0.8 seconds by default. You can increase or decrease this by 0.1 seconds using Option # 21. Minimum = 0.5 seconds.

TACH MODE PROGRAMMING

INTRODUCTION

This system has 3 methods of monitoring the engine running. Option #1 controls how the system monitors the engine running.

1. **Tach Reference Mode – Monitors Engine R.P.M.** - Most reliable method, see Tach programming below.
2. **Tachless Mode - Default.** When vehicle is remote started, the battery voltage rate will go up because the Alternator starts working. The Tachless Mode is adjustable in 1% increments thru Option 21.
3. Not Used.
4. **Hybrid Mode** – For electric motors that are computer controlled. This provides a 4 second crank output to activate the start sequence on Hybrid vehicle. Don't use on vehicles with gas or diesel engine, doesn't monitor stalled engine or low battery voltage.

TACH REFERENCE MODE: Provides reliable remote starting performance though engine speed sensing. When using Tach Reference Mode, the WHITE/RED wire is used for Tach signal [Engine RPM] input. Most modern engines include various points where the Engine Speed [Tach] or A/C signal may be obtained. Tach Signal examples: Fuel Injection Solenoids, Negative (-) side of ignition coil, at the Distributor or Ignition Control Module, Coil Pack, Engine Computer, or Crankshaft Sensor. Sometimes an Alternator Stator pin can be used. These Tach Signal locations mentioned are provided as a guide, your vehicle may differ. Some locations will NOT be a good location for Tach source due to RF noise or Computer Data.

Note: When using a Databus module for Tach signal, don't connect up the Tach wire. This will create a conflict. The System can only use one Tach source.

TACH PROGRAMMING:

1. Red White wire should be connected to a valid Tach source.
2. Start engine with key.
3. Press program button 5 times, then wait for 5 light flashes and/or 5 horn honks.
4. Push program button once more. (You must get one light flash and/or honk after button is pressed.) This unit is now at option #1-Tach Learning.
5. Press the #1 Lock Button on remote transmitter. The unit will read the Tach source and flash the lights and or honk once for program confirmation. (On models without remote transmitters, press the brake pedal in this step.)
6. If lights do not flash for confirmation, then try another tach source or try the tach finder to locate another wire

TACH FINDER & USEFUL TIPS

TACH FINDER MODE:

This Tach Finder mode can assist in locating a Tach source for your installation. When following the steps, the unit will begin to flash the parking lights if you have the Red/White wire connected to a tach source. If lights do not flash, then try another wire until you locate a tach signal that will cause the Parking lights to flash. **NOTE:** On some vehicles equipped with daytime running lights, it may be difficult to see any flashing parking lights. In this case your only notification will be the slight “ticking” sound coming from the module’s flashing light relay.

TACH FINDER STEPS:

1. Open hood (or ground Gray hood pin wire if no hood pin is installed)
2. Start Engine with the key.
3. Press the Program button for 2 seconds
4. Lights will begin flashing if the Red/White wire is connected to a valid tach source. If not try a different tach wire.
5. Once Tach is located then turn off engine and close hood to abort (Remove Gray hood pin wire from ground).
6. Now follow the Tach Programming steps.

TACH FINDER TIP: Cold Weather / High Idle Simulation:

The tach finder mode can also be used to help determine how your CoolStart system may operate in a cold weather situation. Once you have a valid tach source programmed into your system, follow test steps below.

1. Go into the tach finder mode.
2. You should have a consistent light flash (like directional or emergency flashers).
3. Slowly raise the RPM level on your vehicle to simulate a “warm-up idle” that is higher than the normal idle level. If and when the lights STOP flashing. Means that this is the point at which the tach signal is out of range of the system.
4. We recommend that you bring the RPM level up to around 1000 RPM's to simulate a cold morning idle.
5. If the lights stop flashing, then we recommend using another tach source. This may help prevent the engine from starting and stalling in the morning or cold weather.
6. If lights flash with engine off, you're connected to a vehicle data wire.

DIESEL GLOW PLUG DELAY

This feature provides a solution for diesel vehicles without having to connect to the Glow Plug-“Wait to Start Circuit” input. This may be due to a variety of reasons for example: If your vehicle does not have a viable “Wait to Start Circuit” or you cannot locate and identify the circuit. You can choose from a selection of “pre-cranking” delay times. Once this mode is activated, the system will NO LONGER monitor the PINK glow plug input wire and will use a delay setting chosen by the installer in the option chart.

NOTES: This feature is OFF by default and must be programmed before use. Once this feature is turned ON, the Pink Glow plug input wire is not used. The Remote start unit will always wait the programmed time before cranking EVEN IF the glow plugs warm up first. There are 3 different Delay times available for use: 10, 15, or 20 seconds. SEE PROGRAMMING OPTION CHART, next section.

HOW TO USE THIS FEATURE:

1. See the “Programmable Options” next section and change Option #22 from "Monitor Glow Plug Light" to one of the delayed time values. (Default setting is to always monitor the PINK Glow Plug input wire.)
2. Once this option has changed the system will wait for the selected time before cranking the engine.

PROGRAMMABLE OPTIONS

You can program multiple options in one session if you start with the lowest option and continue on to higher options [if needed] without repeating steps #1-3 below. For example, you can follow the programming steps to change Option #2 to “OFF” by pressing the lock button on the remote, then you can continue pressing the program button additional times to get to a high number option and change the setting without having to repeat Steps 1-5. You can only go from low to higher option numbers in one session.

To Engage Option Programming:

1. Turn Key to the ON position and wait 5 seconds.
2. Press valet / program button 5 times, after a few seconds the unit will chirp / flash the lights 5 times.
3. Push the valet / program button [again] the number of times that corresponds to the option number desired (1 thru 31). You must get a chirp / light flash after each button press. See chart on next page for option list.
4. When you reach the desired programming level, Press button #1, #2 #3 or #4 to change the option (you can also press brake pedal 1-4 times).. You will get 1-4 chirps / light flashes as confirmation.
5. Turn Ignition OFF and check for changed features.

OPTION PROGRAMMING TABLE

Option #	Option Description	TX Button #1	*TX Button #2* (Default Value)	TX Button #3	TX Button #4
1	Engine Monitoring	Learn Tach	*Tachless*		Hybrid Mode
2	Pink/White Wire Selection	(+) ACC 2	(+) *IGN 2*	(+) START 2	
3	Passive Arming	Passive Arm with Lock	*OFF*	Passive Arm without Lock	
4	Active Re-Arm / Auto Re-Arm	Active Re-Arm with Lock	*OFF*	Auto Re-Arm with Lock	Auto Re-Arm without Lock
5	Arm / Disarm thru OEM Remote (data mode only)	ON	*OFF*	ON with 3 Press Lock = Start	
6	Parking Lights on w/Disarm	OFF	*ON*		
7	Data Port Protocol	ADS - OFA Series	*EVO & SL Series*		
8	Remote Start & Trunk Pop Button Press	Double Button Press	*1/2 Second Press*	Press and Hold 2 seconds	
9	3 Chirps with Remote Start	OFF	*Siren*	Horn	Horn and Siren
10	Disarm with Trunk Pop	OFF	*ON*		
11	Open Door Warning	5 Sec.	*60 Seconds*	15 Seconds	30 Seconds
12	Door Lock Pulse Time	3 Sec.	*0.5 Seconds*	Double Unlock	Wake Up Pulse on Unlock
13	Auto Lock with Ignition	Lock and Unlock	*OFF*	Security Lock with IGN door & Brake	
14	Lock with Remote Start	OFF	*Lock with Remote Start Only*	Lock with Remote Start and Abort	Lock with Abort Only
15	Transmission Type	Manual Transmission set with Remote Control	*Automatic*	Manual Transmission set with Hand Brake	Manual Transmission with auto shut down after door closed
16	Unlock before Remote Start	ON	*OFF*		

OPTION PROGRAMMING TABLE

17	Blue/Black Wire Function	AUX #2 Momentary	<i>*(-) When Running*</i>		
18	Siren Output	Trigger Only	<i>*Arm / Disarm / Warning / Trigger*</i>	Warning & Trigger	
19	Horn Output	Trigger Only	Warning & Trigger		
20	Horn Chirp Confirmation	1 Press	2 Press		
21	Horn Pulse (Chirp Duration)	15 milliseconds	20 milliseconds	40 milliseconds	
22	Minimum Starter Crank Time	(-) 0.1 Seconds	*0.8 Seconds*	(+) 0.1 Seconds	(+) 0.4 Seconds
23	Diesel Glow Plug Delay	10 Seconds	*Monitor Glow Plug	15 Seconds	20 Seconds
24	Remote Start Engine Run Time	10 Minutes	*20 Minutes*	30 Minutes	5 Minutes
25	Smart Tachless Voltage Adjustment 79-100%	- 1%	*Set to 93% for default*	+ 1%	
26	Idle Down Run Time	10 Minutes	*20 Minutes*	30 Minutes	Infinity Run
27	Aux # 3	Steady Momentary	(-) *ACC*	Timed	Latch On/Off
28	Aux # 3 Time : 1 to 255 sec.	- 1 Second	*12 Seconds*	+ 1 Second	+ 10 Seconds
29	Aux # 4	Steady Momentary	(-) *IGN*	Timed	Latch On/Off
30	Aux # 4 Time : 1 to 255 sec.	- 1 Second	*12 Seconds*	+ 1 Second	+ 10 Seconds
31	Turbo Timer Mode	1 Minute	*OFF*	3 Minutes	5 Minutes
32	PINK Wire function	Passive Carjack	*Glow Plug*		
33	1-Way or 2-Way	2-Way	1-Way		
34	Smart Phone baud rate	9600	115200		
35	Reset Options to default (*)	*Reset Options 1 thru 32*			

1. Engine Monitoring:

This option controls how the system monitors the engine running. You can program for Tachless mode that monitors battery voltage, Tach mode in which the unit uses a Tach signal (RPM) or for Timed Crank as an alternative. There are 4 choices for this option:

PROGRAMMABLE OPTIONS

1. Engine R.P.M. (Tach) - Most reliable method. Tach must be programmed for this option to work.
2. **Tachless Mode - Default.** When vehicle is remote started, the battery voltage rate will go up because the Alternator starts working. The Tachless Mode is adjustable in 1% increments thru Option 21.
3. Blank – No Function
4. Hybrid Mode – For vehicles that have a computer controlled starter. This provides a 4 second crank output to activate the start sequence on Hybrid vehicle. Don't use on vehicles with gas or diesel engine, doesn't monitor engine running or low battery voltage. Option #21 allows you to shorten starter crank time if necessary.

2. PINK / WHITE WIRE SELECTION:

This option controls the High Current Pink / White wire function.

1. Pink / White = Accessory 2
2. **Pink / White = Ignition 2 - Default.**
3. Pink / White = Start 2

3. PASSIVE ARMING:

This option is used to automatic arm the alarm system 30 seconds after the ignition is tuned off and the last door is closed. If a door is reopened during the 30 second countdown, the system will wait and begin the countdown again after the door is closed. There are 3 choices:

1. Passive Arm with Lock – The system Locks the doors with Passive Arm. This choice is best for security but increases the risk of locking the keys in the ignition.
2. **OFF = Default** – No Passive Arming.
3. Passive Arm without Lock – The system Passive Arms without locking the doors.

4. ACTIVE REARM / AUTO REARM:

The option controls whether the alarm system rearms 30 seconds after disarm. This is handy if the vehicle is accidentally disarmed without your knowledge. There are 4 choices:

1. Active Rearm ON – The system will Rearm and lock the doors unless the door, hood or trunk is opened.
2. **OFF = Default** - No Automatic Rearm in Passive or Active Mode.
3. Auto Rearm with Lock - The alarm system will always rearm and lock the doors after disarm unless the ignition is turned on. This applies to Passive and Active Mode. This choice is best for security but increases the risk of locking the keys in the ignition.
4. Auto Rearm without Lock - The alarm system will always rearm without locking the doors after disarm unless the ignition is turned on. This applies to Passive and Active Mode.

PROGRAMMABLE OPTIONS Cont.

5. ARM & DISARM thru OEM REMOTE:

This option allows the OEM factory remote to Arm, Disarm and Remote Start the system. This feature only works on newer CANBUS vehicle using a Data Module that supports this feature. You can select Arm and Disarm only or Arm, Disarm and Remote Start (requires pressing lock 3 times). **Default = OFF.**

6. PARKING LIGHTS ON WITH DISARM:

Keeps parking lights 30 seconds when system is disarmed to assist in locating and providing illumination near your vehicle when approaching at night for safety.

7. DATA PORT PROTOCOL: **Default = EVO / SL Series**

This option controls the Data Port Protocol for ADS / OFA Series modules or EVO / SL Series modules. The default is set for EVO / SL Series Protocol. This option has no effect on conventional wiring of Bypass modules. Both Data Protocols are 2-Way communication.

8. REMOTE START and TRUNK POP – Button Press Selection:

To eliminate the possibility of accidentally opening the trunk or starting the vehicle, there are (3) options for button press selection. This option will allow you to change whether the Remote starter and Trunk release activate by a:

1. Double button - ½ second presses.
2. **Single ½ second press - Default.**
3. Press and Hold 2 seconds. Aux 2 output stays active as long as remote button is pressed.

9. CHIRPS with REMOTE START ACTIVATION:

This option controls whether the system gives 3 short chirps when engaging a remote start. There are 4 choices:

1. OFF – No chirps with remote start.
2. **Siren only = Default.**
3. Horn only.
4. Siren and Horn.

10. DISARM with TRUNK POP:

This option controls whether the system will disarm when the Trunk release is activated from the remote control. **Default = ON.**

PROGRAMMABLE OPTIONS Cont.

11. OPEN DOOR WARNING:

This option changes the delay time in which the alarm system begins to monitor the Door circuit. This option will prevent the alarm from giving warning chirps on vehicles with a delayed dome light. You can set the time delay for 60, 30, 15 or 5 Seconds. The **Default = 60 Seconds**.

12. DOOR LOCKS:

This option sets how the door lock circuit works. There are 4 choices:

1. 3 Second Lock and Unlock - For older European vehicles that require a long lock and unlock pulse to operate Vacuum door lock systems.
2. **0.5 Second Lock and Unlock - Default.**
3. Double Unlock – This feature may be required to interface with a factory alarm or keyless entry system. The first pulse disarms the factory alarm; the 2nd pulse unlocks the doors.
4. “Wake Up” pulse on Unlock - 0.5 second unlock pulse along with Ignition, Disarm and (-) RUN to wake up a BCM. This feature may be required to interface with a factory alarm or keyless entry system.

13. AUTO LOCK and UNLOCK with IGNITION:

This feature controls whether the doors will automatically lock when the ignition is turned on and unlock when the ignition is turned off. Some vehicles already have this feature from the factory you should turn off this option. Doors will not lock if they are open to prevent locking the keys in. There are 3 choices:

1. ON
2. **Off = Default**
3. Security Lock – Locks after door closed and brake pedal is released. This is to relock doors when picking up passengers.

14. LOCK with REMOTE START:

This option controls whether the unit will automatically lock during and after a remote Start abort or time-out. There are 4 choices for this option:

1. OFF
2. **Lock with Remote Start Only - Default.**
3. Lock with Remote Start / Lock and Arm OEM Alarm with Remote Start Abort.
4. Lock and Arm OEM Alarm with Remote Start Abort only

PROGRAMMABLE OPTIONS Cont.

15. TRANSMISSION TYPE:

This option selects automatic or manual transmission mode. Manual transmission requires a Tach wire.

1. Manual Shift Transmission - Requires Remote Start Button pressed with (-) Hand Brake Activated.
2. **Automatic Transmission – Default.**
3. Manual Shift Transmission – Exit procedure starts with (-) Hand Brake Set and engine running.
4. Manual Shift Transmission – System finishes exit procedure automatically. Remote Starter shuts down 2 seconds after closing last door. Not necessary to press remote to set up manual transmission.

16. UNLOCK BEFORE REMOTE START:

This option is used to disarm an OEM Alarm System before Remote Start. **Default = OFF**

17. BLUE/BLACK WIRE FUNCTION:

This option controls the function of the Blue/Black wire as either a Ground with Remote Start or a 2nd Aux. Channel.

18. SIREN OUTPUT:

This option controls whether the Siren Chirps with Arm / Disarm and Warning. There are 3 choices:

1. Siren Activates with Alarm Trigger only.
2. **Siren Chirps with Arm / Disarm / Warning and Alarm Trigger - Default.**
3. Warning Chirps and Alarm Trigger (no arm / disarm chirps).

19. HORN HONK OUTPUT:

This option controls whether the Car Horns Chirp with Arm and Disarm and Warning. There are 3 choices:

1. Horn Honk with Alarm Trigger only.
2. **Warning Chirp and Alarm Trigger - Default.**

20. HORN CHIRP with LOCK and UNLOCK - 1 or 2 Button Press

This option allows the system to chirp the vehicle horn for Lock/Unlock confirmation on 1 button press or a 2nd press within 3 seconds. The horn output must be connected to use this feature. **Default = 2 Press.**

21. HORN PULSE DURATION: This option allows adjustment the “CHIRP” pulse duration of the car horns. The choices are 15, 20 or 40 milliseconds.

PROGRAMMABLE OPTIONS Cont.

22. MINIMUM STARTER CRANK TIME: *Default = 0.8 seconds*

This option controls the Minimum Starter Cranking time. This does not affect maximum crank time. This can be adjusted in 0.1 second increments Up or Down from 0.5 to 4 seconds. The starter can still crank up to 4 seconds with a 0.8 setting, depending on Tach or Tachless setting.

TIMED START, use Hybrid Mode (option 1-4) with this option to set a fixed crank time. Please Note: In Hybrid Mode there is only 1 start attempt and the ignition is left on.

23. DIESEL GLOW PLUG DELAY

This option controls the system's Diesel vehicle interface. Using this option you can control whether the unit monitors the vehicle's glow plug circuit using the Pink input wire (Default), or you may select a specific delay time Before cranking. This option is helpful if you are unable to locate a glow plug signal. Just select a delay time and do not connect the Pink Glow Plug wire. Selections: 10, 15, 20 seconds, or Monitor Pink Wire (Default).

24. REMOTE START ENGINE RUN TIME: Set engine run time for 10, 20, 30 or 3 minutes as desired.

25. ULTRA-SMART TACHLESS VOLTAGE ADJUSTMENT:

This option controls the voltage reference point when using smart Tachless mode. Pressing the Lock or Trunk buttons on the remote raises or lowers the reference level in 1% increments from 80%-100%. Button #2 resets the unit to the factory default reference point of 93%. The default 93% setting works for most vehicles. See page 16 for additional Ultra-Smart Tachless mode information.

26. IDLE DOWN RUN TIME:

This feature allows the remote starter to take over operation of a parked vehicle when the ignition key is removed and you exit the vehicle. The vehicle will remain running for the programmed time or until canceled. There are 4 choices: ***Default = 20 minutes.***

1. 10 Minutes
2. ***20 Minutes - Default***
3. 30 Minutes
4. Infinity Run (parking lights flash in this mode)

PROGRAMMABLE OPTIONS Cont.

27. Aux #3: ACC or Aux Output (Violet/White wire)

This option controls the function of the Violet/White wire for a negative output for a Momentary, Pulse, Timed or Latched output, depending on option used. Option #27 controls the length of time output.

28. Aux #3 Time control: (1 sec. to 255 sec.) Default = 12 seconds

This option determines the length of time that is outputted from Aux #3 (Violet/White wire). Pressing the Lock or Trunk buttons on the remote raises or lowers the time by one second. Pressing the Start button increases the time 10 seconds.

29. Aux #4: IGN or Aux Output (Green/White wire)

This option controls the function of the Green/White wire for a negative output for a Momentary, Pulse, Timed or Latched output, depending on option used. Option #29 controls the length of time output.

30. Aux #4 Time control: (1 sec. to 255 sec.) Default = 12 seconds

This option determines the length of time that is outputted from Aux #4 (Green/White wire). Pressing the Lock or Trunk buttons on the remote raises or lowers the time by one second. Pressing the Start button increases the time 10 seconds.

31. TURBO TIMER: Using Remote Start Button

The optional Turbo Timer mode allows the Pro Start system to keep a Turbo or Turbo Diesel vehicle running for 1, 3 or 5 minutes [selectively] after you remove the key and exit the vehicle. This is handy for turbo cool-down without the need for expensive turbo timers. The **Default = OFF**.

32. PINK WIRE FUNCTION: PASSIVE CAR JACK TRIGGER or GLOW PLUG INPUT:

This option controls whether the system's PINK input wire functions as a Glow Plug input wire for Diesel Engines or a +12V input for tripping a Carjack countdown. For Glow plug, this wire should be connected to the wait to start light circuit. For Carjack this wire can be connected to a hidden push button, or a +12V Ignition circuit for Passive Car Jack operation (see operations manual). **Default = Glow Plug**.

PROGRAMMABLE OPTION RESET

33. 1-WAY or 2-WAY SYSTEM:

This selects 1-Way or 2-Way antenna system. The 1-Way system uses AM transmission. The 2-Way system uses FM transmission. The RF range will be much improved using the FM 2-Way antenna system. You must select this option using the brake pedal or remote control. If you accidentally change system from 1-Way to 2-Way (or vice versa), you need to use the brake pedal to change option 33 back to correct antenna system.

34. Smart Phone Baud Rate: 9600 or 115200

This is only used with a Smart Phone GPS modem. Must be set up to match modem speed.

35. OPTION RESET: (RESTORE TO DEFAULT)

This option restores all programmable options 1 thru 32 to factory default. The unit will flash the lights 2 times and all values will be reset to factory original settings. ***Resetting the option table to default does not change the type of antenna system.***

REMOTE PROGRAMMING

Note: All transmitter codes must be learned at time of programming!! The system learns up to 4 different transmitter codes.

1. Turn key to the ON position. (Pink wire must be connected.)
2. Press Programming button 4 times, then after a few seconds the unit flashes the parking lights 4 times.
3. Press button #1 of the first transmitter. You should get 1 light flash confirming the remote is coded, then press button #1 of a second transmitter, the unit will flash 2 times confirming the remote is coded and so on. If all 4 codes are learned, the unit will automatically exit code learning mode, otherwise turn key off.

2-VEHICLE PROGRAMMING

2 VEHICLE CONTROL

Your remotes have the ability to control a second vehicle with a Crimestopper system installed.

To set up the 2-Vehicle operation you must first program your remotes to Vehicle #2. Follow the “Transmitter Programming” steps (Pg. 26) at the second vehicle and learn YOUR remote, along with vehicle #2’s existing remotes.

2-VEHICLE NOTES:

(1) You do not have to switch between Vehicle “1” and “2” to get pages from each vehicle. Your remote pager will receive pages from both cars regardless of which vehicle the pager is set to. The “1” or “2” icon will always display with each page indicate which vehicle the page originated from.

(2) When, all remote/pagers and sidekick remotes for that vehicle must be learned at the time of programming. When you program your remote at the second vehicle, that vehicle’s original remote must also be programmed. Your remote should be set in Vehicle “2” and the vehicle’s original remote should be set in Vehicle “1”.



LCD REMOTE

VEHICLE 1 = 1 - 1

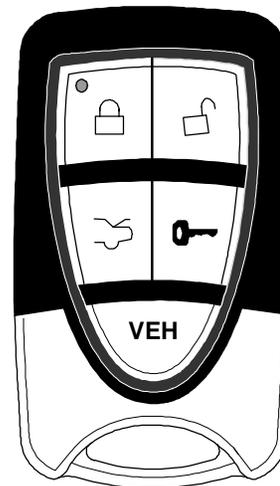
VEHICLE 2 = 2 - 1

VEH 1 / VEH 2

Push 2 Seconds
to change from
Vehicle 1 to 2

CLOCK SET

Push VEH Button 5
Times to set Clock



SIDEKICK REMOTE

VEHICLE 1 = BLUE LED

VEHICLE 2 = RED LED

VEH 1 / VEH 2

Push 2 Seconds
to change from
Vehicle 1 to 2

Note: Use can use Vehicle 2 Mode to turn off remote if there is no system installed in a 2nd vehicle

ALARM TRIGGER DIAGNOSTICS

This systems includes disarm diagnostics, through the LED light, that will help in determining what caused the last trigger of the alarm system. This is a valuable tool in determining how the vehicle was tampered with or if there is a false alarm problem in which case you can make the necessary adjustments to correct the problem.

When the system is disarmed with the remote you will hear the normal 2 chirps, then 4 quick chirps that indicate the alarm was triggered while you were away. Check the LED light for a sequence of flashes:

- 1 LED Flash = Shock Sensor Violation**
- 2 LED Flashes = Door Violation**
- 3 LED Flashes = Hood Violation**
- 4 LED Flashes = Ignition Violation**
- 5 LED Flashes = Trunk Violation**

Diagnostics will reset when the Ignition is turned on or when the system is re-armed.

REMOTE START DIAGNOSTICS

If the system flashes the LED and Parking Lights one to seven times and doesn't attempt remote. The LED will continue to flashing the error code until the ignition is turned on, it means the following:

- 1 Parking Light Flash (1 LED Flash) = Problem with Brake Switch.**
- 2 Parking Light Flashes (2 LED Flashes) = Problem with Hood Switch.**
- 3 Parking Light Flashes (Solid LED) = Valet Service Mode.**
- 5 Parking Light Flashes (5 LED Flashes) = Ignition On before Remote Start.**
- 6 Parking Light Flashes (6 LED Flashes) = Tach Problem (Tach signal without engine running)**
- 7 Parking Light Flashes (7 LED Flashes) = Manual Transmission Error.**

Note: In Manual Transmission Mode, the LED will Flash 3 times if the parking park is not set.

MANUAL TRANSMISSION MODE

MANUAL TRANSMISSION INSTALLATION: OPTION 15

TACH WIRE = White/Red must be connected and programmed. (Default = Tachless Mode)

HAND BRAKE = Green wire on 9 Pin Low Current Plug. (Default = Start Activation)

After programming Option #15-1, #15-3 or 15-4 for manual transmission mode, the Door Trigger and Hand Brake wire must be connected for the manual transmission remote start procedure. The Green “Start Activation” wire becomes a Hand Brake input that must be used for the manual transmission remote start procedure. A Databus module can also supply the Door and Hand Brake status signal on most late model vehicles. Please check Databus module features before connecting door and hand brake wires. A door opening will now cancel a remote start that was previously “set-up” by the user. The Hand Brake and Door Trigger is a safety feature to cancel a remote start.

Note: You can't use the interior lights as a door trigger if the interior lights turn on with ignition off.

OPTION 15 - TRANSMISSION TYPE: Manual Transmission Requires Tach Wire Connected and programmed.

This option selects automatic or manual transmission mode - 3 Choices of operation.

1. Manual Shift Transmission - Requires Remote Start Button pressed with (-) Hand Brake set.
2. **Automatic Transmission – Default.**
3. Manual Shift Transmission – Starts Exit procedure with (-) Hand Brake Set and engine running.
4. Manual Shift Transmission – Starts Exit procedure with (-) Hand Brake Set, engine running and auto shut down after last door closed.

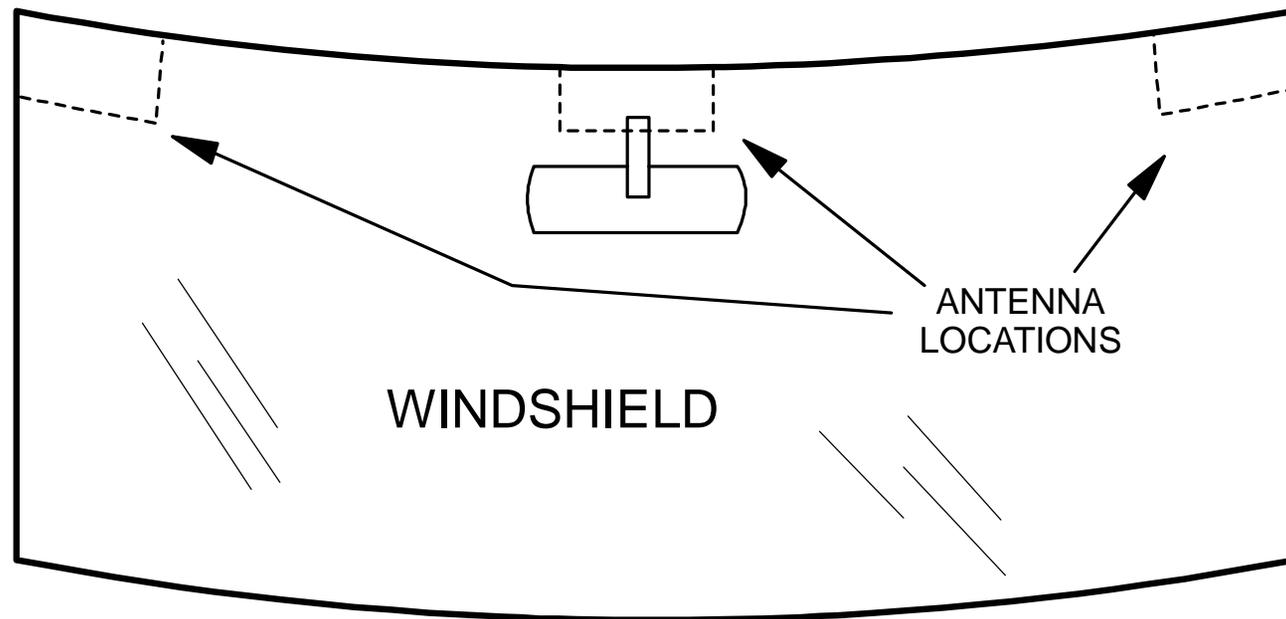
MANUAL TRANSMISSION EXIT PROCEDURE:

1. **Option 15-1:** With engine running and vehicle in neutral, set parking brake, then press “Start” button on transmitter. The remote starter will turn on and take over operation of the vehicle.
2. **Option 15-3:** With engine running and vehicle in neutral, set parking brake. The remote starter will turn on and take over operation of the vehicle.
3. Remove key, exit vehicle (remote starter unit must “SEE” door opened, then closed with engine running).
4. Press Lock button within 10 seconds of closing door for “Idle Down” (engine stays running). Press Lock a 2nd time to cancel “Idle Down” (engine turns off) and set up Manual Transmission Mode.
5. Press Lock button after 10 seconds to Lock the doors and shut down the engine. The system will remote start the engine unless a door is opened.

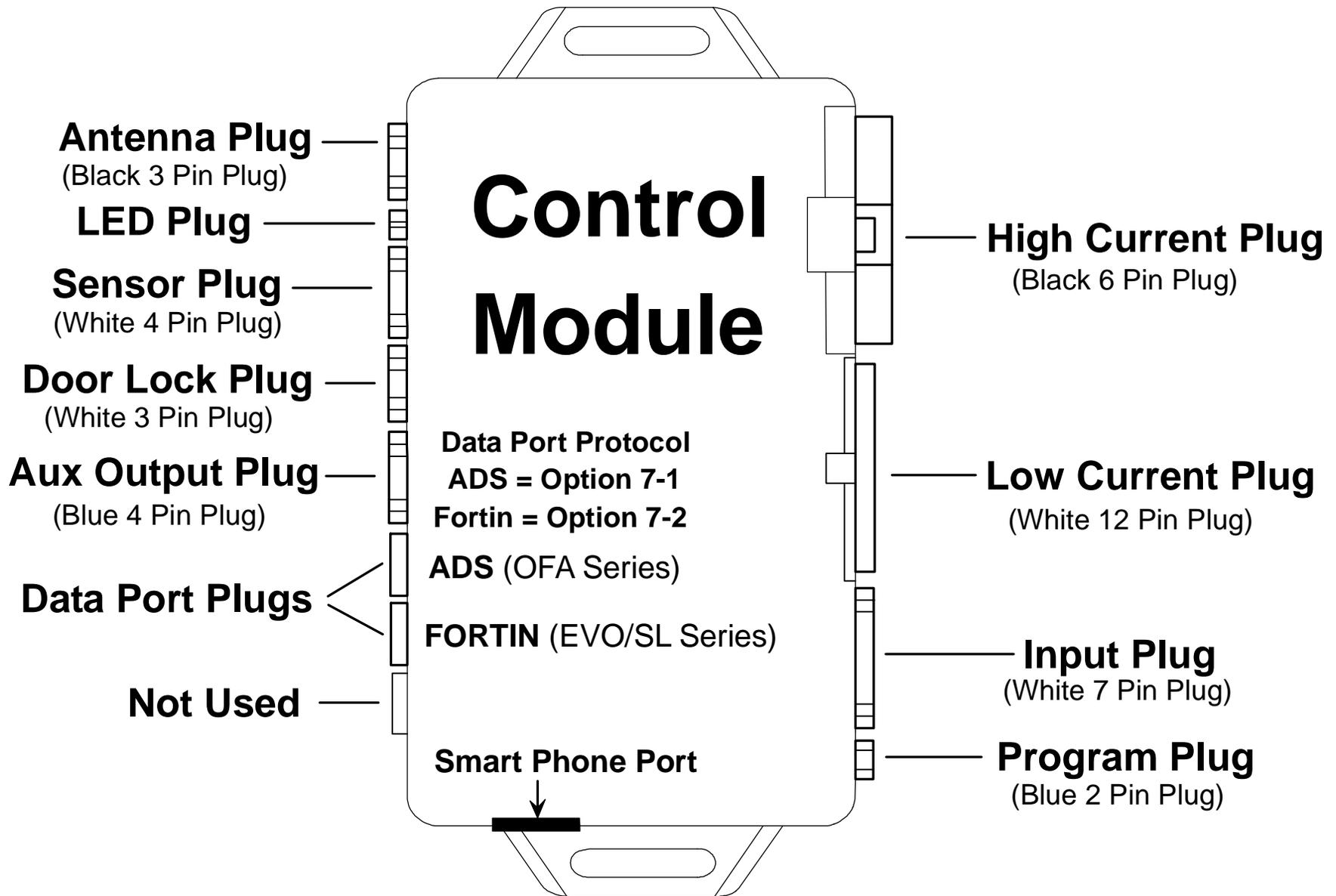
6. Press the Remote Start Button after closing door to set up Manual Transmission Mode without Locking or Arming OEM Alarm System.
7. **Option 15-4:** With engine running and vehicle in neutral, set parking brake, the remote starter will turn on and take over operation of the vehicle. Remove Key and exit vehicle. When the last door of vehicle is closed, the engine will turn off in 2 seconds and set up Manual Transmission Mode. You can arm the alarm system to lock doors and protect vehicle.

ANTENNA DIAGRAM

ANTENNA MODULE: For optimum range and performance, the antenna should be located high up on the front windshield glass. For example: behind the rearview mirror. Note: Window tints or Films may decrease the range of the system. The mounting surface for the antenna should be clean and dry.



CONNECTOR PLUGS

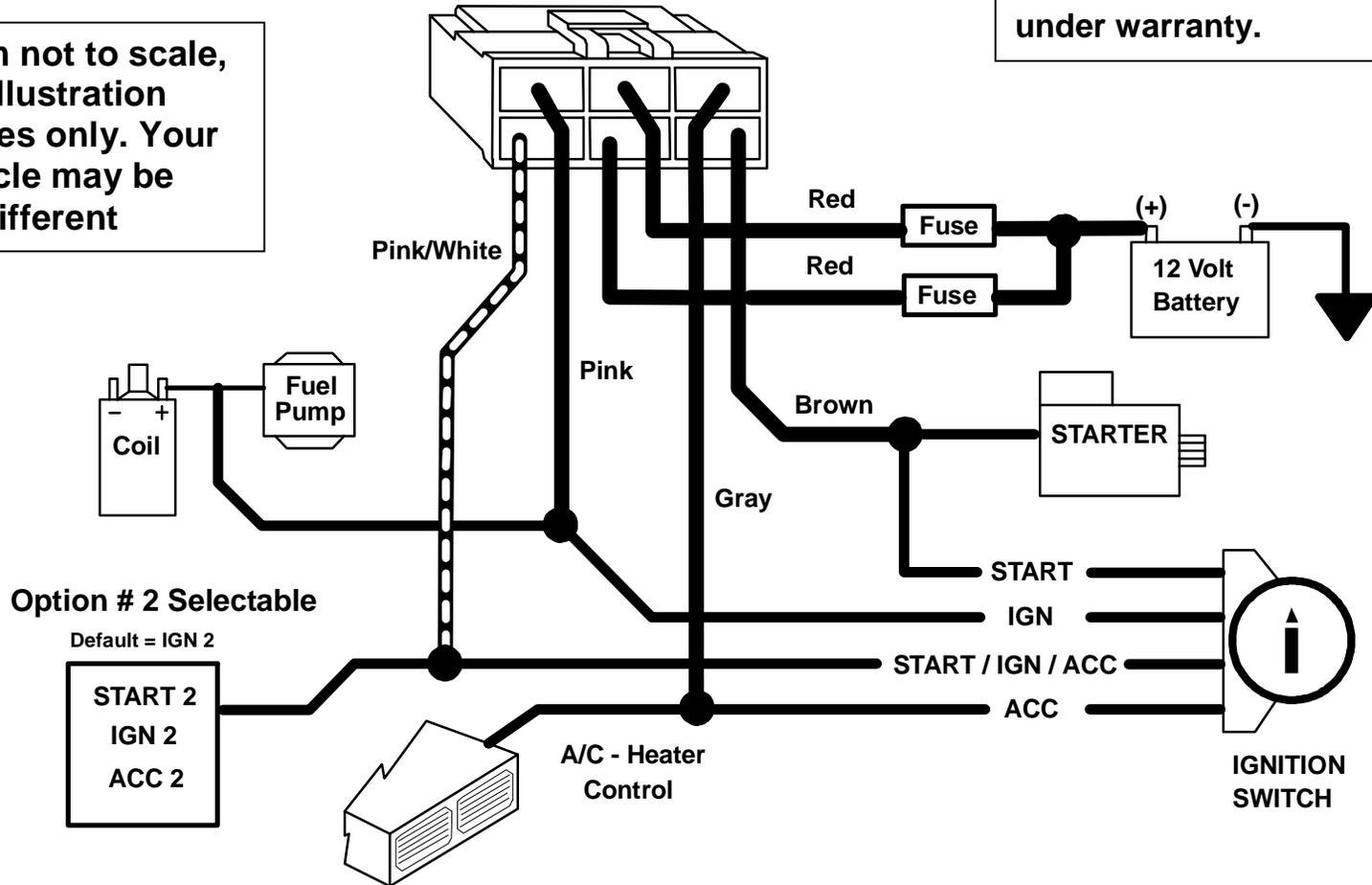


WIRING: 6-PIN High Current Connector

- BROWN:** STARTER OUTPUT
- GRAY:** ACCESSORY (HEAT/ACC)
- RED:** +12V POWER INPUT (BATTERY) FUSED (30A)
- RED:** +12V POWER INPUT (BATTERY) FUSED (30A)
- PINK:** IGNITION 1 (Run, Crank)
- PINK/WHITE:** START 2, IGN 2, ACC 2 OUTPUT (Programmable)

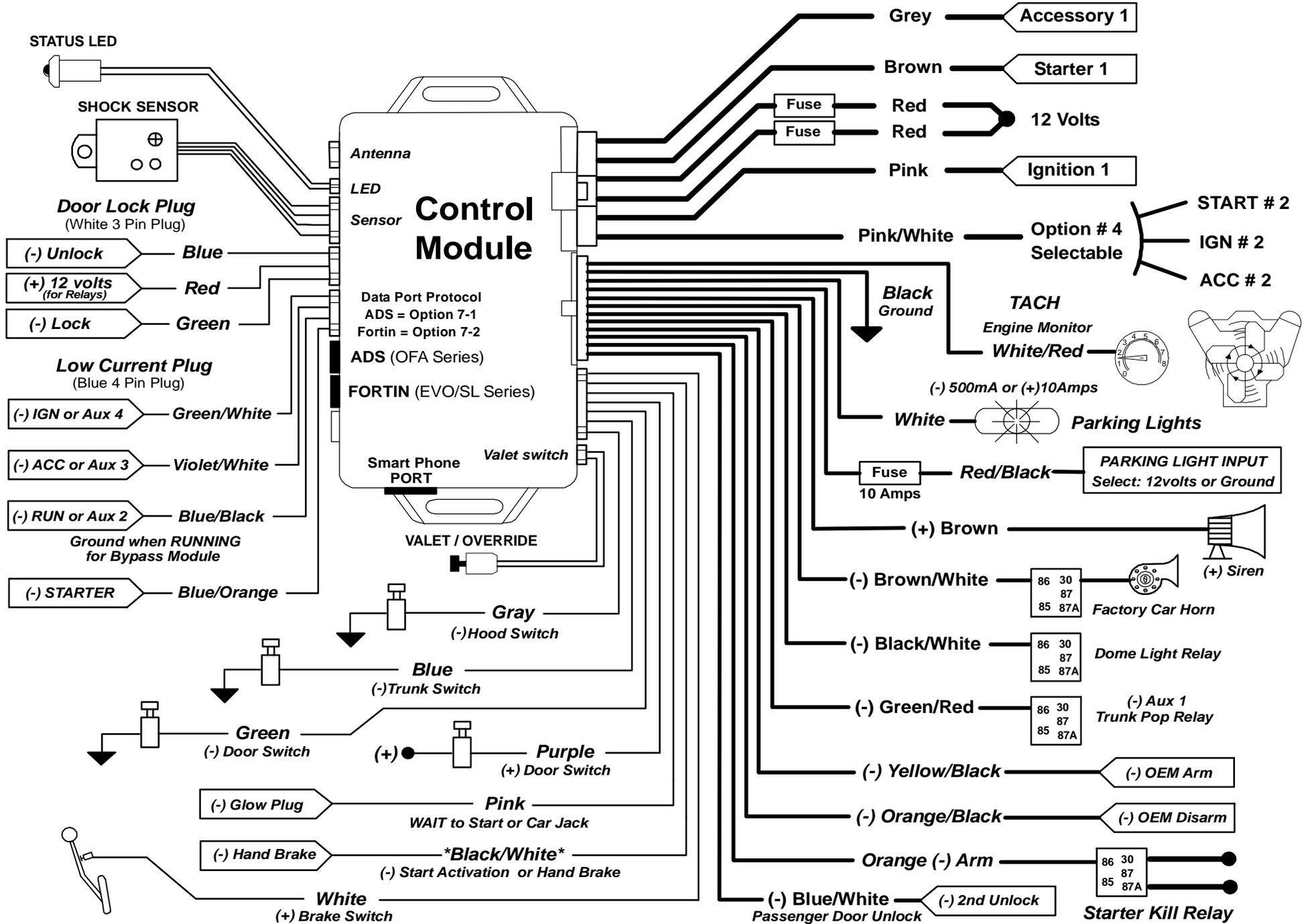
NOTE! Use External Relays for High Current Ignition and/or Accessory circuits greater than 30A. Failure to do so could result in damage to the unit that is not covered under warranty.

Diagram not to scale, for illustration purposes only. Your vehicle may be different



***** Fuse Holders Wire Connections should NOT GET HOT *****

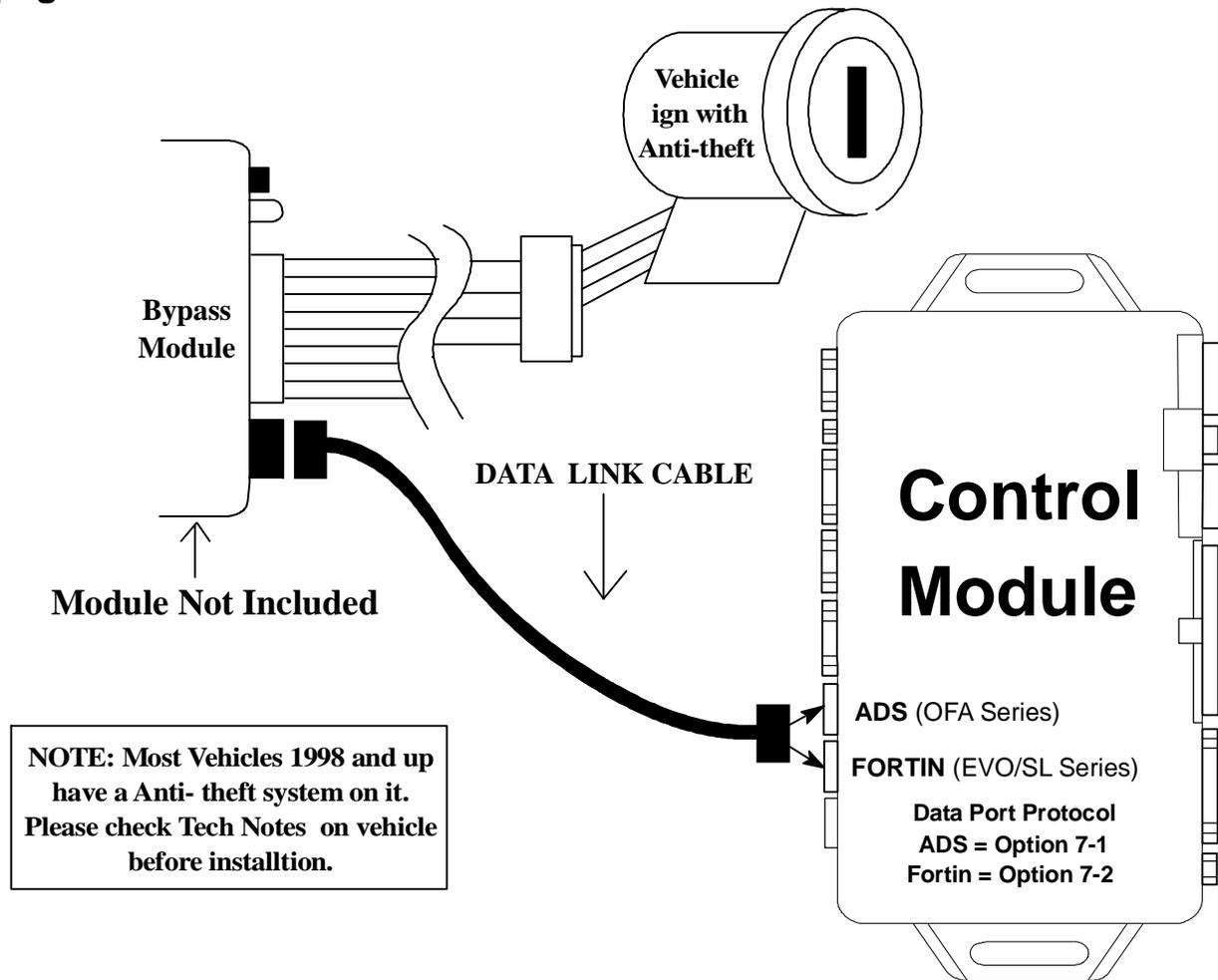
WIRING DIAGRAM



DATA PORT DIAGRAM

This unit includes DP Technology that will allow you to directly Plug-In our Data Port Bypass Modules. There are 2 types of Protocol, OFA series and EVO SL series modules. The default is set for EVO SL series Protocol. Please refer to Databus module manual for detail instructions. The Data Port Protocol must be programmed for the correct module.

See Option # 7 on page 19



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