

RS-840 MODEL



REMOTE ENGINE STARTING SYSTEM INSTALLATION INSTRUCTIONS

INTRODUCTION

Congratulations on your choice of a CoolStart™ system by Crimestopper! This installation Handbook covers the RS-840 model Remote Start & Keyless Entry System.

DISCLAIMER:

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. 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.

TECHNICAL SUPPORT: (800) 998-6880

Monday - Friday 8:00am - 4:30pm Pacific Std. Time

Web Site: www.crimestopper.com

E-mail: tech-support@crimestopper.com

CRIMESTOPPER SECURITY PRODUCTS, INC.

1770 S. TAPO STREET, SIMI VALLEY, CA. 93063

REV A 08.2004

This device complies with FCC Rules part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful 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 modifications to this equipment. Such modification could void the user's authority to use 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 and determine most suitable locations for all components to be placed. These components include: the module itself, valet/program button, possible relays, and antenna/receiver. Allow enough wire to create a service loop with strain relief, should servicing be required. This will also allow easier access and mounting.

DAMAGE to the EZEE Start unit resulting from incorrect installation or failure to follow guidelines stated in this book will not be covered under warranty and will be subject to repair or replacement charges.

USE A VOLT/OHM METER to test and locate all connections. Test Lights can damage a vehicle’s computer systems.

ADDITIONAL PARTS, which are not included with this unit, may be needed for your particular vehicle. These items may include extra relays or Anti-Theft System Bypass modules.

INSTALLATION CAUTIONS & WARNINGS

****FOR SAFETY REASONS, DO NOT INSTALL in vehicles with MANUAL TRANSMISSIONS.**** If accidentally left in gear, a remote started vehicle could become a self-propelled threat to life and property.

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 or improper performance.

DO NOT route any wiring that may become entangled with brake, gas pedals, steering column or any other moving parts in the vehicle.

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 that is not covered under warranty.

DO NOT remote start the 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.

WIRING

PIN 9: BLACK: MAIN SYSTEM GROUND

Connect to chassis metal of the vehicle. An existing bolt or screw may provide an adequate ground, or drill a small hole, scrape away paint and attach using a sheet metal screw & star washer. This wire must be connected to a proper ground or undesirable and inconsistent operation will occur. Do not use Factory ground locations.

PIN 8: YELLOW/BLACK: (-) IGNITION OUTPUT / ANTI GRIND RELAY

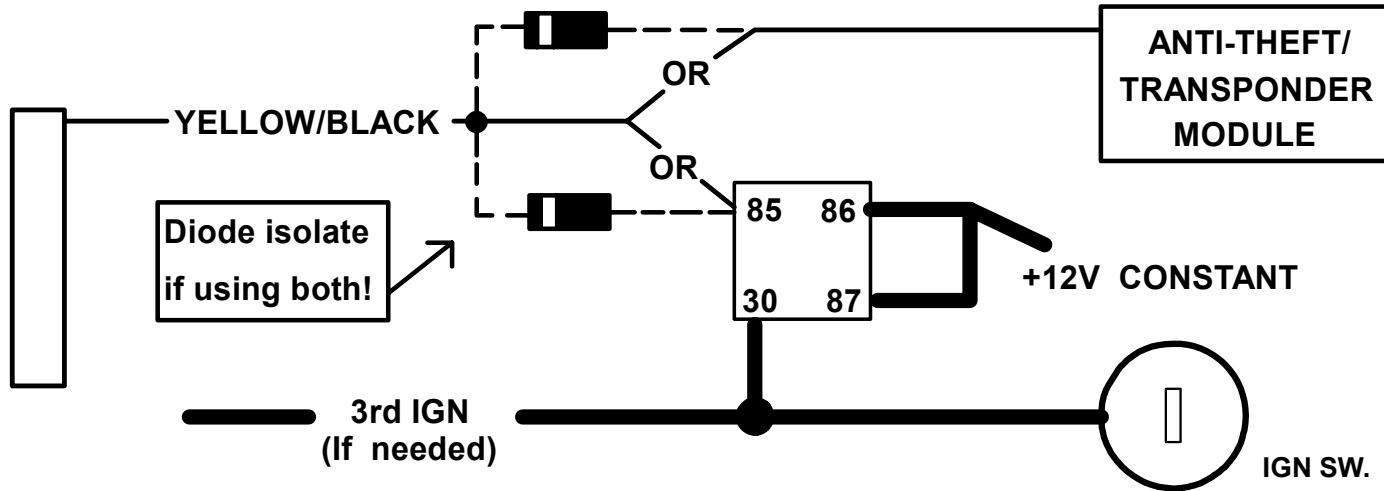
Use this wire to turn on Anti-theft /Transponder Bypass modules, an Anti grind output, or to trigger a 3rd Ignition relay if your particular installation requires a 3rd Positive Ignition circuit. This wire turns on when the remote start button is pressed and stays on through the duration of the remote start. When using this wire for an Anti grind output, an optional Relay is needed to interrupt the Starter circuit preventing accidental grinding of the starter if key is turned too far after a remote start. External relays for Ignition #3 or Anti Grind are not included. See diagrams on NEXT PAGE.

PIN 7: BROWN: (-) AUX OUTPUT (TRUNK POP)

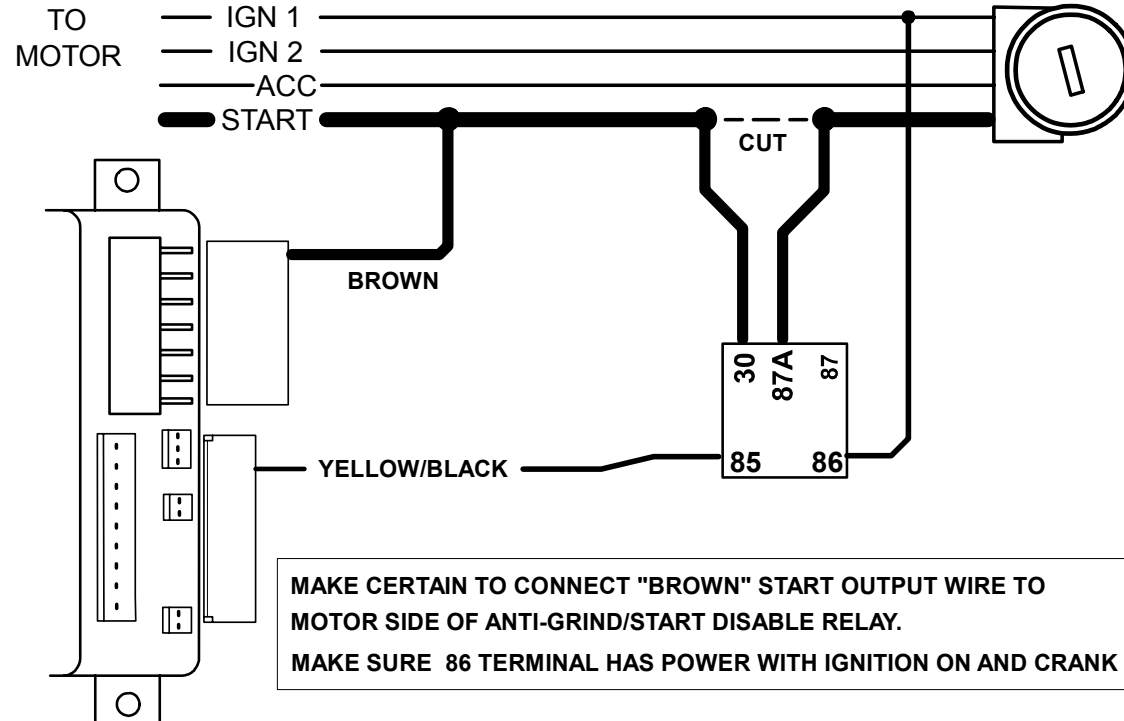
This output will provide a ground pulse when button #3 (Trunk) on the remote transmitter is pushed to activate a factory electric trunk release or other optional accessory.

WIRING

PIN 8: YELLOW/BLACK FOR NEGATIVE IGNITION OUTPUT: (Relay and/or Module not included)



PIN 8: YELLOW/BLACK: FOR ANTI-GRIND/STARTER DISABLE OUTPUT: (Relay not included)



WIRING

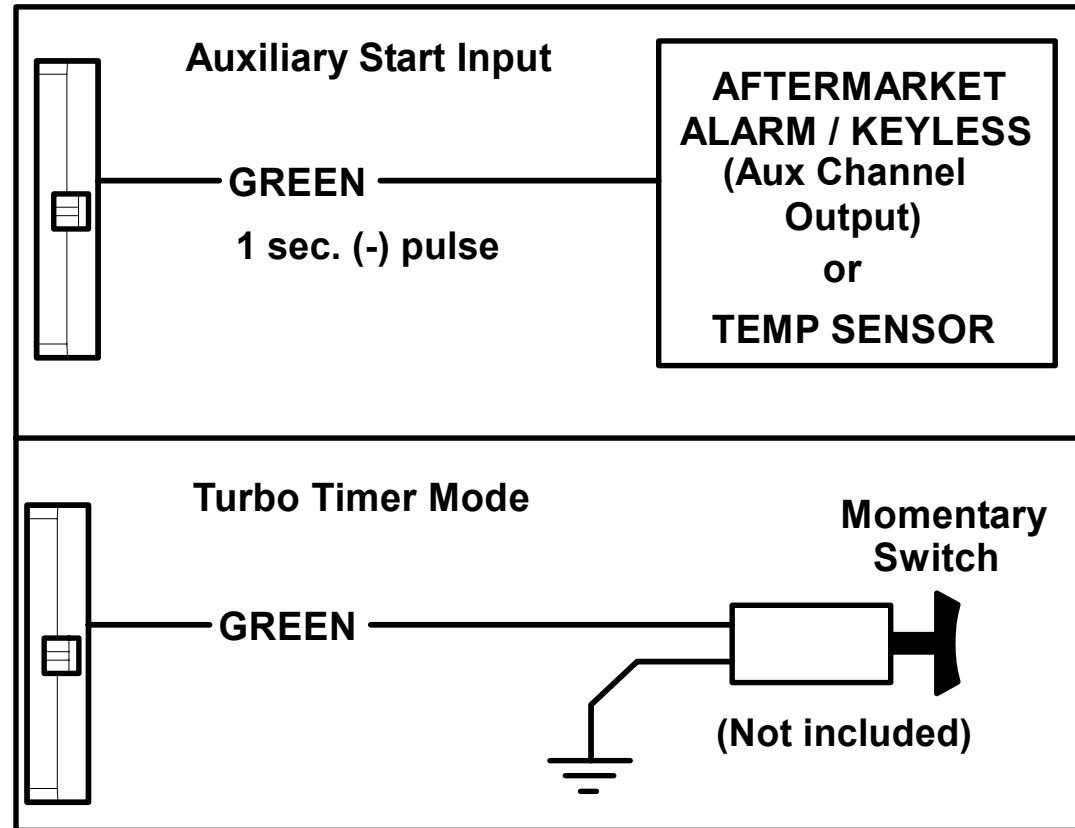
PIN 6: GREEN: (-) START ACTIVATION INPUT & TURBO TIMER INPUT

See descriptions below & diagrams at right:

(-) NEGATIVE START TRIGGER INPUT: a 1-Second Negative Ground pulse on this wire will trigger a remote start or stop a remote started engine. Connect the Green wire to optional outside sensors such as the Crimestopper RS-400 CoolStart Temperature/Timer module. This wire can also be connected to the Negative output channel of an alarm or Keyless entry system.

TURBO TIMER INPUT: This wire allows the system to keep a vehicle running for 1-5 minutes [selectively] after removing the key. This mode requires the use of a momentary switch that is not included with the kit. Connect a 2-pole momentary switch with one side to chassis Ground and the other side to the Green input wire. If you own a turbo or turbo diesel vehicle, you can now allow the EZEE Start system to keep your engine running for 1-5 minutes after exiting/locking your vehicle to cool-down without the need for an external "Turbo Timer".

NOTE: *The turbo timer button will also trigger a remote start if it is inadvertently pressed when the vehicle is not running. Please note this when installing the button and choose a location out of harm's way*



PIN 5: GRAY: (-) NEGATIVE HOOD PIN SWITCH (REQUIRED FOR PROGRAMMING)

Connect the Gray wire to a switch that is at ground when the hood is open. If an existing switch is not available, then we recommend installing the supplied pin switch. When this wire is grounded, (hood is open) the remote start is inhibited. The hood pin is required for option and remote transmitter programming. If installing the supplied pin switch, find a location around the perimeter of the engine compartment. Do not to mount pin switches in water pathways. A small Brown wire is included in the kit when connecting the pin switch.

WIRING

PIN 4: PURPLE: (+12V) BRAKE RESET

Connect the Purple wire to the side of brake pedal switch that shows +12 volts ONLY when pedal is depressed. This is the wire that turns off the remote start once the driver's key is in the Ignition and turned to the ON position.

PIN 3: ORANGE/BLACK: (-) 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. This wire may not be needed if Factory Security only requires a door unlock pulse.

PIN 2: ORANGE: (-) 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.

PIN 1: RED/WHITE: TACHOMETER INPUT

When installing this system in Tach mode, this wire must be connected to a source of A/C voltage. This wire allows the unit to sense the engine running and control the starter motor. See TACH REFERENCE MODE.

PROGRAM/OVERRIDE SWITCH: 2 PIN PLUG (REQUIRED FOR PROGRAMMING & LEARNING REMOTES)

This switch is used for programming features, transmitters and valet mode.

LED: 2 PIN PLUG (OPTIONAL)

The LED is used as a VALET/PROGRAMMING indicator.

WIRING: 7-PIN HIGH-CURRENT CONNECTOR

BROWN: +12V STARTER OUTPUT 40A:

Connect to circuit in the vehicle that has power ONLY while the STARTER MOTOR is CRANKING.

GRAY: +12V ACCESSORY OUTPUT 40A:

Connect to circuit in the vehicle that provides Accessory Power for systems such as HEAT and A/C. Typically, this wire turns ON with the first position of the key, DROPS OUT WHEN CRANKING, then returns as the engine starts and runs.

(2) RED: +12V POWER INPUT WIRES (30A Fused):

Connect to both of these leads to +12V Constant Power. We recommend the Battery POSITIVE Terminal.

WIRING: 7-PIN HIGH-CURRENT CONNECTOR

PINK: +12V IGNITION OUTPUT 40A:

Connect to circuit in the vehicle that provides true Ignition Power for systems such as Spark and Fuel. Typically, this wire turns ON with the second position of the key, STAYS ON WHEN CRANKING, and continues ON as the vehicle runs.

PINK/WHITE: +12V MULTI-FUNCTION OUTPUT 40A (JUMPER SELECTABLE):

This is an optional multi-function output wire that can be configured as a Second IGN, ACC or STARTER output. Some vehicles require more than just one IGN, ACC, or STARTER wire in order to start and run successfully. If this is the case for your particular vehicle, then use the jumper pin located under the access panel on the top of the EZEE Start control module to configure this wire to suit your needs. The DEFAULT setting is IGNITION. See Jumper Pin Diagram.

NOTE: Heavy duty/High Current Ignition circuits, Industrial vehicles, dual AC, etc. require high-current relays. DO NOT use the outputs of the RS-840 for High-Current systems or you will risk damaging the unit and creating a hazardous condition! Use Part #CS-403 relays for circuits up to 70 amps.

WHITE: +12V or (-) NEGATIVE PARKING LIGHT OUTPUT:

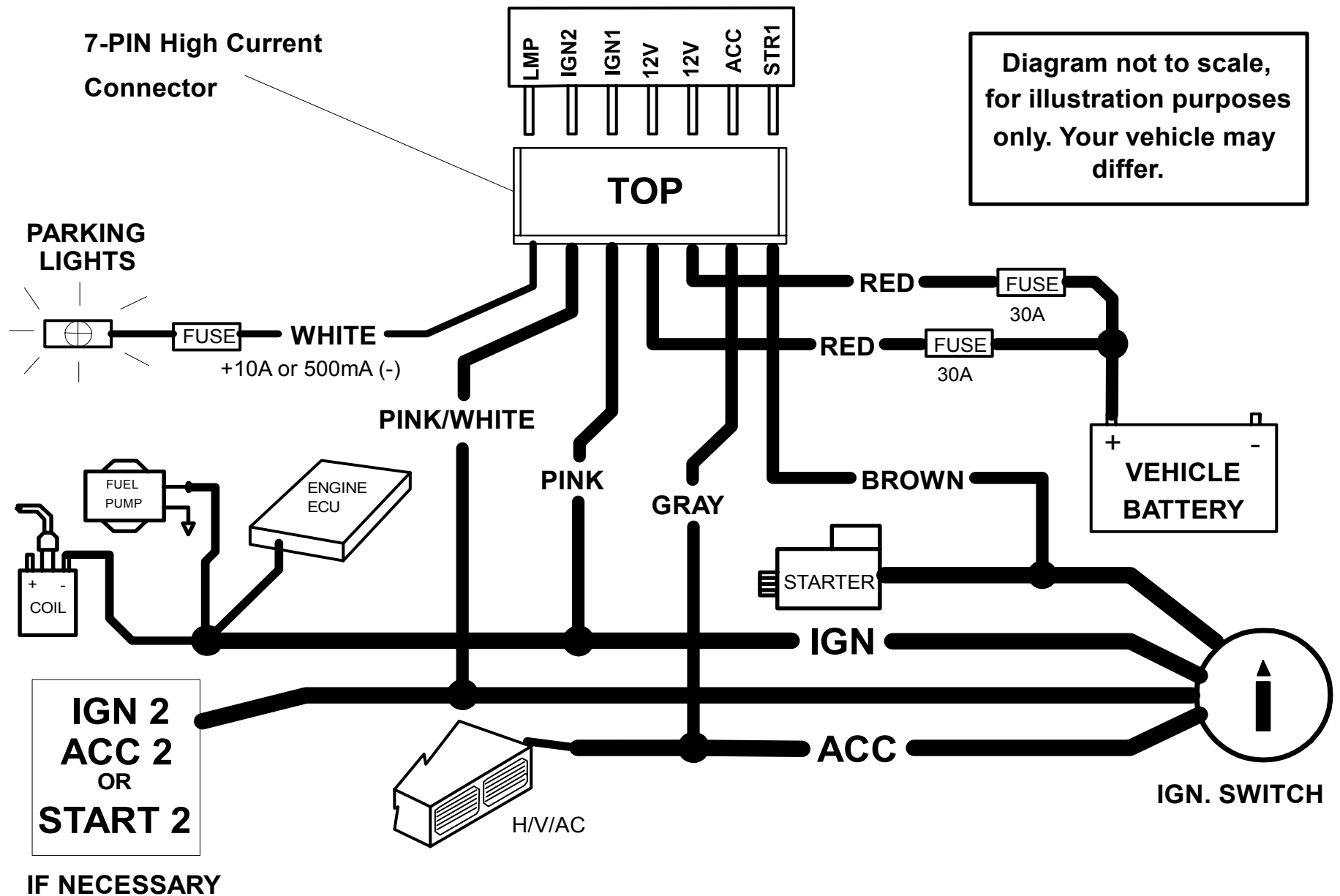
Connect to vehicle parking light circuit at the back of light switch or if this is not possible, connect directly to one of the parking lights at the front of the vehicle. If your vehicle has a multiplex lighting system that requires a (-) Negative parking light output, then open the access door on the top of the module and move the jumper. See Jumper Pin diagram at the back of this booklet. Note the current limit on the Negative parking light output. You may require an external relay to prevent damage to the unit.

(1) Default parking light output is +12 volts.

(2) Use an external relay for vehicles that draw excess current from extra running lights, light bars, or trailers. Parking light output is limited to +10 or -.5 AMPS only.

(3) Some European vehicles require separate left and right circuits. Use a dual relay or diodes to isolate the output.

WIRING: 7-PIN HIGH-CURRENT CONNECTOR



3-PIN POWER DOOR LOCK WIRING CONNECTOR

GREEN: (-) Negative pulse for LOCK

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

BLUE: (-) Negative pulse for UNLOCK

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 differ.

Negative Trigger (-): Many Imports; Late model Ford, GM and others.

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 Systems 2003-UP GM Trucks & SUV's, '99-04 Jeep Grand Cherokee

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.

Crimestopper Door Lock Accessories:

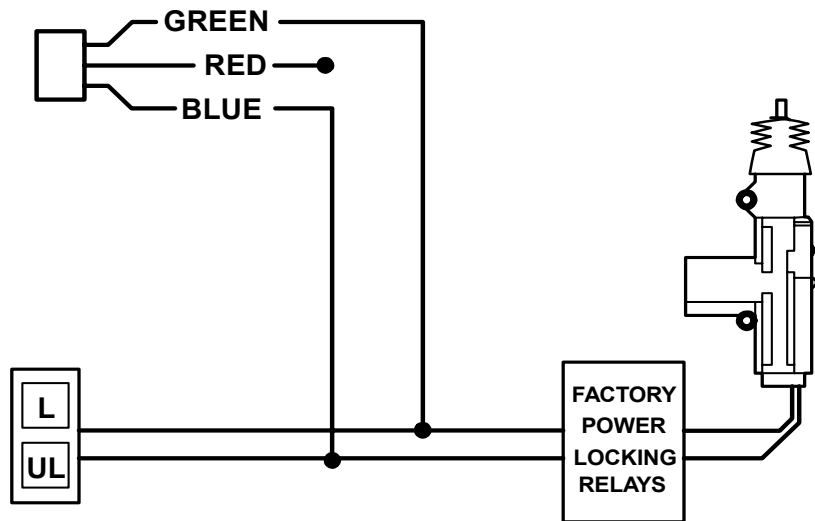
CS-6600DLM: Dual-relay plug-in module for Reverse Polarity, Positive, or Aftermarket Motors.

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

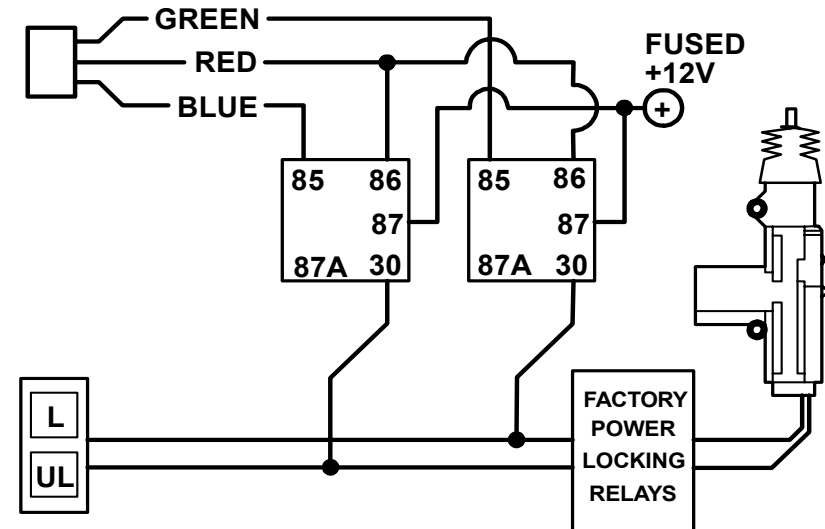
CS-610S1: Aftermarket door lock actuator (motor).

BASIC POWER DOOR LOCK DIAGRAMS

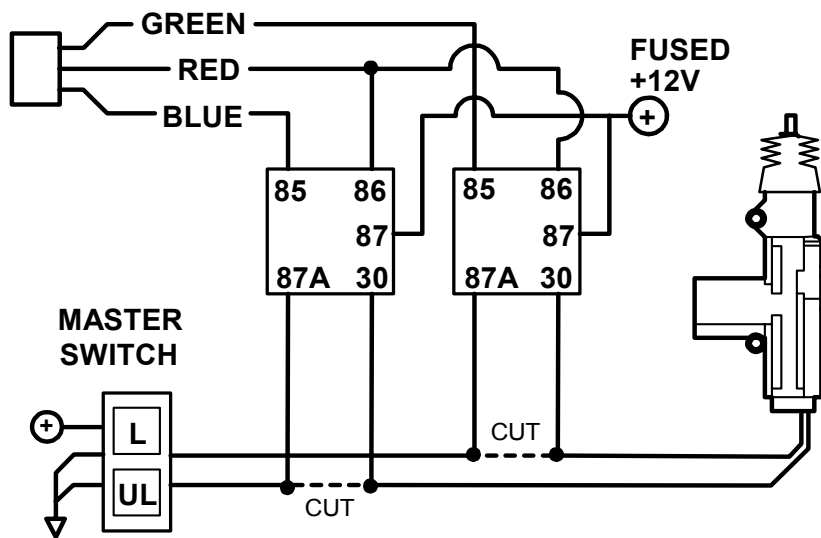
NEGATIVE TRIGGER DOORLOCK WIRING



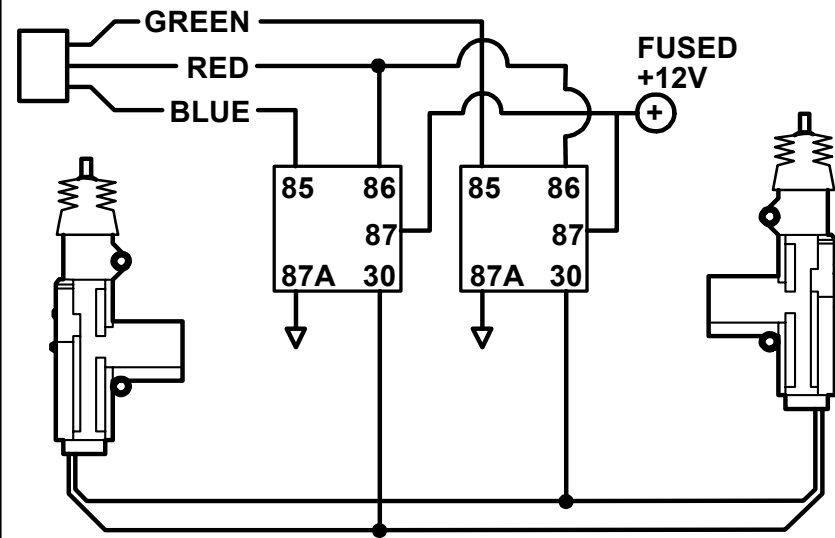
POSITIVE TRIGGER DOORLOCK WIRING



REVERSE POLARITY DOOR LOCK WIRING



AFTERMARKET MOTOR/DOOR LOCK WIRING



“SMART TACHLESS” MODE

Your CoolStart system includes a unique voltage monitor called “Smart Tachless” mode. This mode allows this unit to efficiently start an engine without the use of a tach signal wire. These modules actively monitor the voltage level of the vehicle to control the starter motor each time a remote start is requested.

IMPORTANT NOTES:

- (1) SETUP may be required for the CoolStart “Smart Tachless” Mode. If your vehicle has not been at rest for a period of time (Hot engine), then you must drain the surface charge from the battery. Unplug main power harness from unit, turn HEADLIGHTS ON for 4 minutes to drain off excess surface charge on vehicle’s battery then reconnect.
- (2) If “Smart Tachless” mode does not operate satisfactorily, we recommend using the “Tach” mode.

TACH FINDER MODE

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 / Valet 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 wire from ground).
6. Perform the Tach Programming steps on next page.

TACH PROGRAMMING & TACH SIGNALS

INTRODUCTION

Tach signals will vary in levels and frequencies depending on many factors including the type of vehicle and the source of the signal. The signals from a vehicle's injector wire and coil pac wire can vary greatly even on the same engine. The tach signal from an engine can also be affected by other sources such as electronic noise from the ignition or computer modules.

TACH MODE

The Tach mode provides reliable remote starting performance through engine speed (RPM) sensing. When using Tach Reference Mode, the Red/White 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: Negative (-) side of ignition coil, at the Distributor or Ignition Control Module, Coil Pack, Engine Computer, or Crankshaft Sensor. Sometimes Fuel injectors, and Alternator stator pins 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.*

TACH PROGRAMMING: (ENGINE MUST BE RUNNING TO PROGRAM A TACH SOURCE)

1. Open hood (or ground Gray hood pin wire if no hood pin is installed.)
2. Red/White wire should be connected to a valid Tach source.
3. Start engine with key.
4. Press program button 5 times, then wait for 5 light flashes.
5. Push program button again once. (You must get one light flash after button is pressed.) This unit is now at option #1-Tach Learning.
6. Press the #1 Lock Button on the remote. The unit will read the Tach source and flash the lights once for program confirmation.
7. If lights do not flash for confirmation, then try another tach source or try the tach finder to locate another wire.

EXAMINING THE TACH FREQUENCY WITH A DIGITAL MULTI-METER (Hz Setting)

If you own a Digital Multi-Meter meter with a frequency counter setting, it can be helpful to measure and research the range of tach signal from your particular engine. When probing your chosen tach wire, observe the frequency reading from the meter at both the warm/low engine idle and cold/high engine idle points. Tach signals ranging between 70Hz and 700Hz are desired. If your tach wire has readings that are not in this range, the unit may not operate properly. The frequency of the tach wire in this range does not guarantee operation. If you cannot locate a good tach source from your engine, then you can switch your CoolStart system to the "Smart Tachless" mode.

DIESEL GLOW PLUG DELAY

This feature provides a solution for diesel vehicles that require a delay for glow plug warm up. You can choose from a selection of “pre-cranking” delay times.

NOTE: This feature is OFF by default and must be programmed before use. Once a delay time is selected, the Remote start unit will always wait the programmed time before cranking EVEN IF the glow plug warms up first. There are 3 different Delay times available for use: 10, 20, or 30 seconds. See Program Option chart next page.

HOW TO USE THIS FEATURE:

1. See the “Option Programming” section below and change option #6 from "Normal" to one of the delay time values.
2. Once this option has changed, the system will wait for the selected time before cranking.

OPTIONS PROGRAMMING

This CoolStart system has 7 programmable control options to customize the system for various operating features and installer preferences. Examine the chart on the next page along with reading the descriptions that follow. You may change one option at a time, or program multiple options in one session. If you start with the lowest option and continue on to higher options, you do not need to repeat steps #1-3 each time. For example, you can change Option #2 to “ON”, then you can continue pressing the program button to get to a higher number option and change it as well. You can only go from lower to higher options in one session.

To Engage Option Programming:

1. Open hood (If no hood pin switch is installed, then ground the Gray wire)
2. Turn Key to the ON position. (Do not start vehicle)
3. Press the program/valet button 5 times. After a few seconds the unit will flash the lights 5 times.
4. Press the program/valet button [again] the number of times that corresponds to the option number desired (1-7X). You must get a light flash after each button press. If the system did not flash the lights, then it did not register your press. Press carefully and do not lose count.
5. Press the Lock/Unlock button on the remote select an option value. The lights flash 1X for Button 1; Twice for Button 2 and so forth. See chart NEXT PAGE for values.
6. When finished changing options, turn Ignition OFF, close hood (or un-ground Gray wire) and check for changed features.

OPTIONS PROGRAMMING

* = Default Value

Option #	Option Description	Option Values	Button #1 LOCK	Button #2 UNLOCK
1.	Tach or Tachless Mode	Tach = Engine RPM Tachless = Voltage monitor	Tach	Tachless*
2.	Autolock with RPM/Ignition	ON or OFF	ON	*OFF
3.	OEM Disarm/Unlock Pulse	0.75 sec. Normal or 0.5 Shorter	Short	*Normal
4.	Double Unlock Pulse	Single or Double Unlock Pulse	Double	*Single
5.	Lock During and After Remote Start Abort	ON or OFF	OFF	*ON
6.	Diesel Glow Plug Delay	Lock button = 10 Sec. Unlock button = Gas 3 sec Delay Trunk button = 20 Sec. Start button = 30 Sec.	10 Sec.	*Normal (3 sec. delay)
7.	Remote Start Engine Run Time	Lock button = 12 Min. Unlock button = 24 Min. Trunk button = 36 Min. Start button = 48 Min.	12 Min.	*24 Min.
8.	Option reset	Unlock Button		Reset to Default

OPTION DESCRIPTIONS:

1. Tach or Tachless Mode:

This option sets how the unit monitors your engine. You can program either for Tach mode in which the unit uses a Tach signal (RPM) or for Tachless mode that monitors voltage level. See pages 11-12 for more information and additional steps for actual Tach learning and Tach finder modes. The system will only learn Tach when the engine is running and the tach wire is connected to an A/C tach source.

OPTIONS PROGRAMMING

2. Auto Lock/Unlock:

This option controls whether the doors will automatically lock/unlock on your vehicle when driving or with turning the Ignition ON/OFF. If the Auto Lock feature is turned on, and the system is in Tach mode, then the doors will lock as the engine RPM's increase (driving). If the Auto Lock feature is turned on, and the system is in Smart Tachless mode, then the doors will lock when the Ignition is turned on. When the Auto Lock feature is turned on, the system will unlock the doors when the Ignition is turned off. With this feature OFF, the system will not automatically lock or unlock the vehicle.

3. OEM Disarm / Unlock Pulse:

Some vehicles (namely Nissan and VW) require a shorter setting prevent the vehicle from attempting to roll down the windows due to the length of the UNLOCK and/or DISARM pulses. Use this option to SHORTEN the OEM Disarm/Unlock Pulses should your vehicle require this. Symptom: Windows will slightly vent or begin to roll down when unlocking.

4. Double Unlock Pulse:

The unit will send 2 unlock pulses when the #2 Unlock button is pressed. This feature may be required for interfacing this alarm with an existing Factory Keyless Entry or Alarm system in a vehicle. These systems are found on some Nissan, VW, Toyota, and Lexus vehicles.

5. Lock During/After Remote Start:

This option controls whether the unit will automatically lock during and after a remote Start abort or time elapses.

6. Diesel Glow Plug Delay:

This option allows the system to work in a diesel vehicle. You can program a specific delay time before cranking to allow for the glow plugs to warm up once you choose a delay time if 10, 20 or 30 seconds, the system will ALWAYS wait for that time period before cranking, even if the glow plugs warm up first.

7. Remote Start Run Time:

This option controls the engine run time for remote start. Select your choice of 12, 24, 36, or 48 minutes. The default setting is 24 minutes.

8. Option Reset: (RESTORE TO DEFAULT)

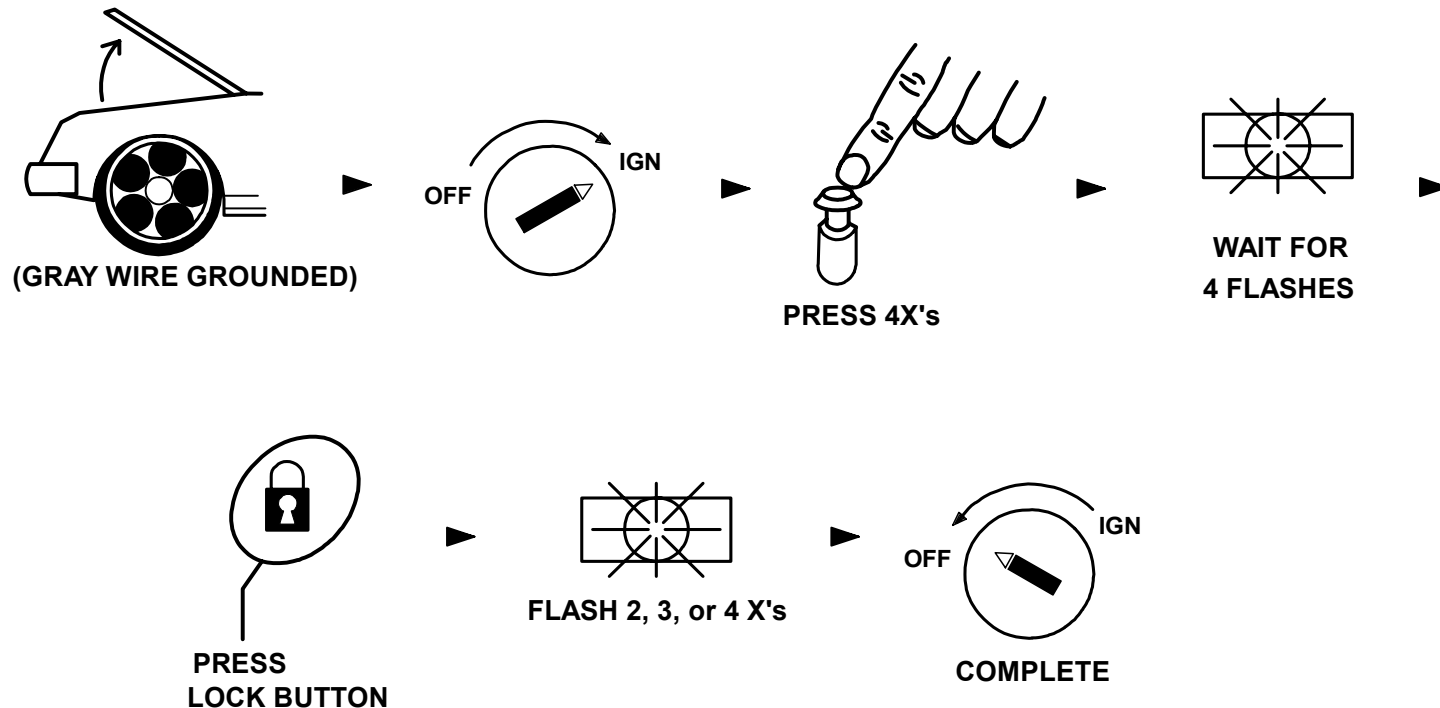
This option allows you to restore all programmable options to factory default values. Go to the option #8 and press the Unlock Button #2 on the remote. The unit will flash the lights 2 times and all values will be reset to factory original settings. Default values are marked with asterisks in the chart on page 14.

RS-840 TRANSMITTER CODE LEARNING

Transmitter Code Learning:

Notes: Remote Transmitters come pre-programmed from the Factory. When re-learning remotes or adding remotes, ALL your system's remote codes must be learned at time of programming!! These systems allow storage of up to 4 different remote codes in memory. Antenna / Receiver must be plugged into unit.

1. Open hood (ground the Gray hood pin wire if no hood pin is installed.)
2. Turn key to the ON position. (Do not start vehicle)
3. Press Program/Valet button 4 times. After a few seconds, the unit will flash the parking lights 4 times.
4. Press Button #1 (Lock) of the transmitter to be learned. You should get 2 light flashes indicating the code-learn. Now the unit is waiting for a 2nd code, so repeat this step as needed with up to 3 additional remotes. The unit will flash the lights in succession after each code learned for up to 4 codes. (2 flashes for the 2nd code, 3 flashes for the 3rd code etc.) If all 4 codes are learned, the unit will automatically exit code learning mode, otherwise turn key OFF and close the hood. (See Diagram Below)

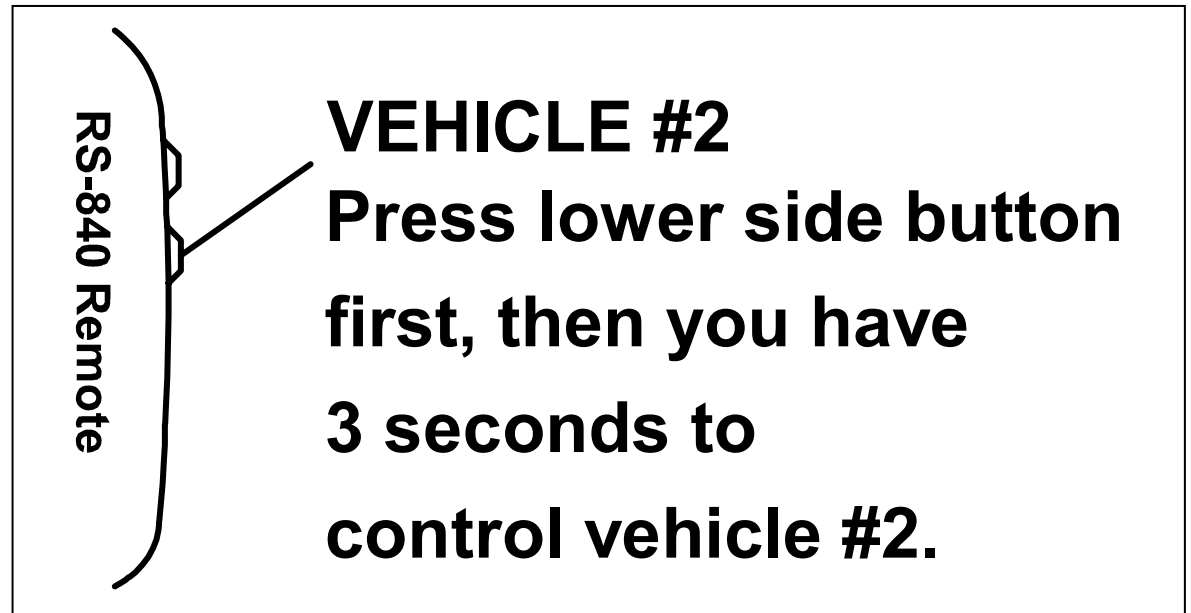


2-VEHICLE OPERATION

The RS-840 system can be used for 2 vehicle operation. A single remote can control a second vehicle with an identical system installed.

Pressing the lower side button on your remote transmitter switches your remote to car #2 mode for 3-seconds. You can continue operating Vehicle #2 functions within this 3-second window as long as you keep pressing buttons. Once the 3-second time period has elapsed, your remote will switch back to Vehicle #1 (primary vehicle).

See diagram at right on how to switch your remote(s) to vehicle #2 operation. To set up the 2-Vehicle operation you must first program your remotes to Vehicle #2. Follow the "Transmitter Programming" steps at the second vehicle and learn YOUR remote, along with vehicle #2's existing remotes.



TROUBLESHOOTING: “BEFORE YOU CALL” SECTION

UNIT WILL NOT ATTEMPT A START (KEYLESS ENTRY FUNCTIONS NORMALLY):

The unit is in Valet mode. Turn IGN ON, press and hold valet/programming button for 5-6 seconds then turn key off. Unit is now out of valet mode and should remote start. If optional LED is installed, then it will be on solid when in Valet.

SYSTEM IS UNSUCCESSFUL AT REMOTE START DURING EXTREME COLD CONDITIONS:

Please be aware that during sub-freezing conditions your remote starter may take more than one attempt to start, or it may not successfully start the vehicle after 3 attempts. During these conditions the vehicle may not properly start even using the key, therefore trying to start by the remote would also be unsuccessful.

UNIT FLASHES LIGHTS ONCE AND WILL NOT ATTEMPT A START:

The unit senses a fault at the Brake (Purple wire is active) or the Hood is OPEN (Gray wire grounded). This is a safety feature of the unit. Check installation for faults and make sure hood is closed and latched and brake wire is not active.

UNIT CRANKS VEHICLE BUT ENGINE NEVER STARTS:

- In some vehicles, there may be a Factory anti theft system that will not allow the engine to run without the key in the ignition. These systems may include Factory Security Modules, GM Passkey®/Passlock®, and RF Transponder systems (Ford P.A.T.S.®). Many late 1990's through 2005 vehicles include some type of anti theft system which may require a bypass module.
- The vehicle may have more than one Ignition or Accessory circuit that requires power for the vehicle to start. This is common on some GM/Toyota vehicles.

VEHICLE STARTS BUT CHECK ENGINE LIGHT COMES ON OR ENGINE RUNS BADLY:

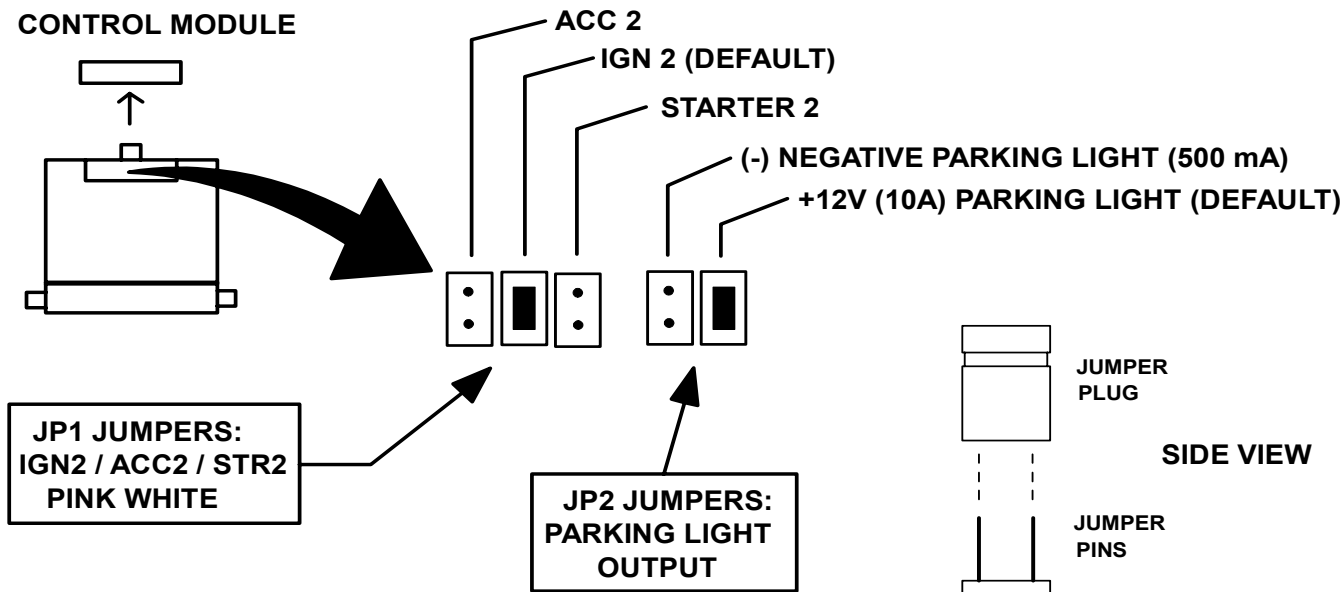
- Many 1995-UP General Motors cars/trucks require a secondary ignition circuit for the Transmission computer and other on board systems. If the vehicle is started without this wire energized, there may be a “Check Engine” or “Service Engine” light on the dash. This may cause damage if the vehicle is driven in this condition. Be sure to check for and additional WHITE (or sometimes GREEN) Ignition wire on GM cars and trucks. Connect the Pink/White IGN#2 wire to this circuit in the vehicle.
- Some Vehicles (Commonly Nissan) require 2 Start (Cranking) circuits for the vehicle to run properly. If this is the case, then use the PINK/WHITE output of this system to power the Starter #2 circuit of the vehicle. See Jumper pin diagram for configuration. Note that the secondary starter wire may be a smaller gauge wire than the primary starter wire.

NO RESPONSE FROM REMOTE TRANSMITTER:

- Check antenna connection: Antenna must be plugged in (3 pin black plug on side of module).
- Press remote control Lock or Unlock button several times in succession to check if remote is out of sync with receiver.
- Verify if remotes are programmed to module, otherwise perform transmitter learning steps.

JUMPER PIN & ANTENNA DIAGRAMS

Jumper pins are used to configure the operation of the on board multi-function output PINK/WHITE wire and the Parking Light WHITE wire. See the diagram below for Jumper Pin configurations.



ANTENNA / RECEIVER GUIDE

