

RS-800 Series IV

Remote Engine Starting System

INSTALLATION INSTRUCTIONS



PRE-INSTALLATION CONSIDERATIONS

To ease and reduce installation time, we suggest you READ THIS MANUAL and consider the following points before beginning your installation:

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 extra relays, and antenna/receiver.

DAMAGE resulting from incorrect installation or failure to follow guidelines stated in this book will not be covered under warranty and 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. Record all color codes of vehicle wiring to be used for reference. This will save time by not having to re-test the same wires over again.

ADDITIONAL PARTS, which are not included with this unit, may be needed for your particular vehicle. . These items may include extra relays (Part#CS-402A), and/or Anti-Theft System Bypass modules.

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CRIMESTOPPER SECURITY PRODUCTS, INC.

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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 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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INSTALLATION CAUTIONS & WARNINGS

****FOR SAFETY REASONS, DO NOT INSTALL THE RS800 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 RS800 Ignition harness length. Mount the module so that main harness reaches all ignition switch wiring. Extending these wires could result in poor performance.

DO NOT route any wiring that may become entangled with brake, and 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 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 INSTRUCTIONS

2 PIN PLUG-PROGRAM/OVERRIDE SWITCH:

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

2 PIN PLUG-(OPTIONAL) LED:

The LED is used as an indicator for Valet mode.

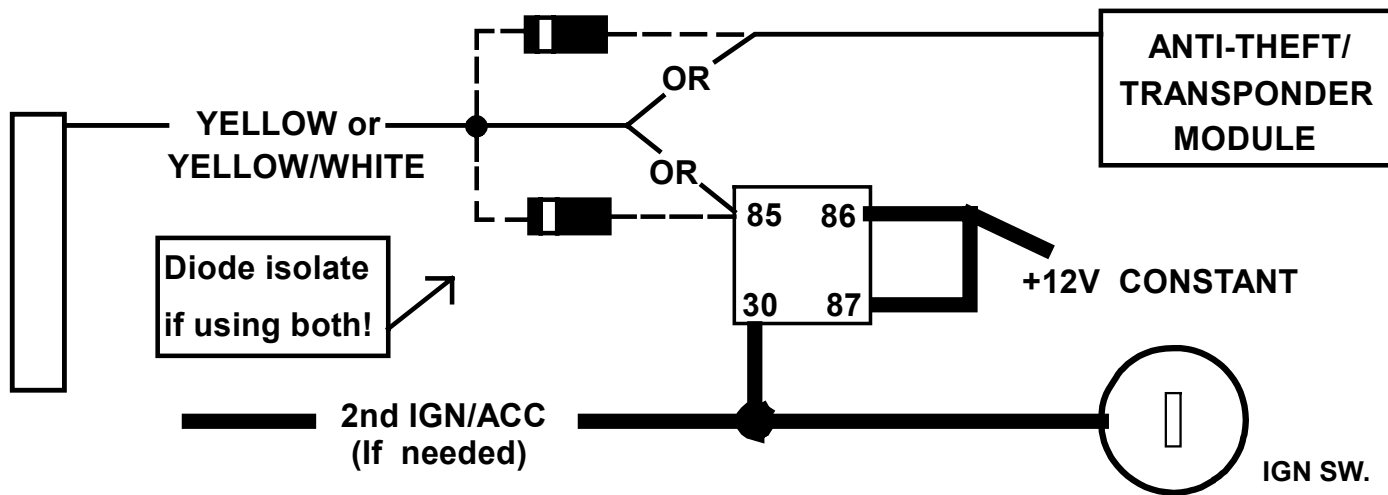
PIN 1 & 2: YELLOW / YELLOW/WHITE: (-) IGN / (-) ACC OUTPUTS (FOR ADDING RELAYS)

Use these wires when the vehicle requires a second IGNITION or ACCESSORY circuit to be activated. The Yellow wire is also used to activate ANTI-THEFT or TRANSPONDER Bypass Modules. Connect to the "ground when running" input of the bypass module. (See Diagram on Below.)

PIN 3: 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 good ground or undesirable and inconsistent operation will occur.

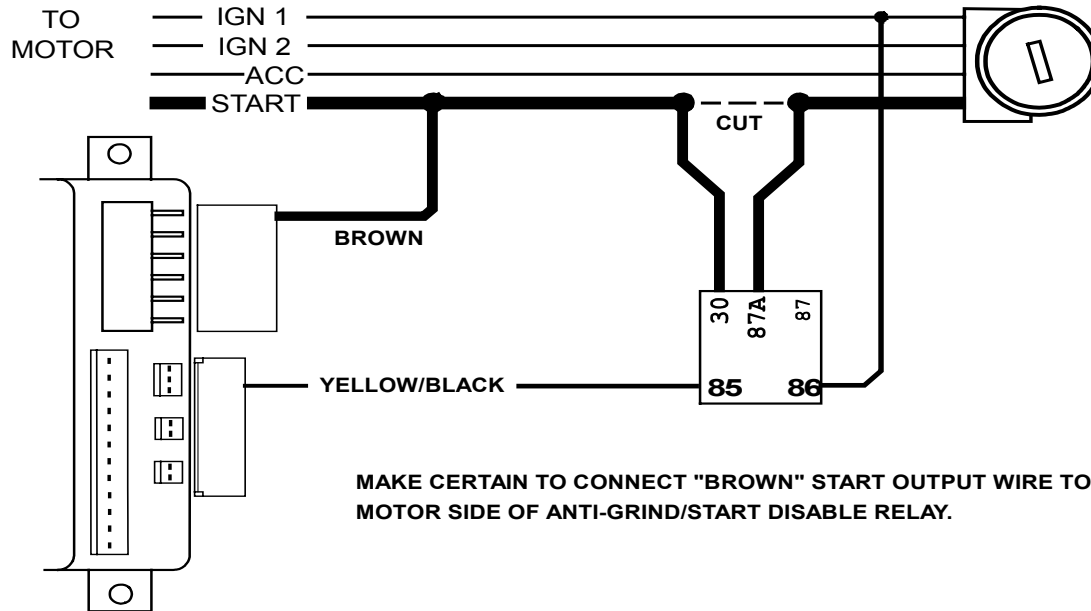
YELLOW / YELLOW/WHITE (-) IGN. & (-) ACC. OUTPUTS (GROUND WHEN RUNNING):



WIRING INSTRUCTIONS

PIN 4: YELLOW/BLACK: (-) ANTI-GRIND/STARTER KILL OUTPUT (OPTIONAL)

Use this wire for the negative side of the Anti-Grind/Starter Disable relay. It can also be used as a sensor disable circuit for a host alarm. This output activates whenever a remote start is requested.



PIN 5: EMPTY (NOT USED)

PIN 6: GREEN: INSTANT START ACTIVATION BY NEGATIVE (-) TRIGGER INPUT (OPTIONAL ACCESSORY)

This wire allows the Auxiliary Channel Output of a separate (host) Alarm or Keyless Entry System to activate a Remote Start. A 1-second (-) Negative pulse on the Green wire will start or stop the engine.

PIN 7: GRAY: (-) HOOD PIN SWITCH

Connect the Gray wire to a switch that is at ground when the hood is open. If an existing switch is not available, then one must be installed. When this wire is grounded, the remote start is inhibited. If hood is opened on a remote started engine, the unit will immediately shut the motor off. If hood is open before a remote start unit will not attempt to start engine.

PIN 8: PINK: (+12V) DIESEL GLOW PLUG INPUT

Connect Pink wire to indicator circuit that shows +12 volts while the "WAIT TO START LAMP" is on. When this wire is used, the system will wait until light turns off before attempting a remote start. Note: For vehicles that have a Negative Wait to Start lamp an extra relay is required.

WIRING INSTRUCTIONS

PIN 9: 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 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.

PIN 10: 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 11: 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 12: RED/WHITE: TACHOMETER INPUT

When installing the RS800 in TACH (RPM) REFERENCE mode, this wire must be connected to a valid source of AC voltage. This wire allows the system to sense the engine speed (RPM) and control the starter motor.

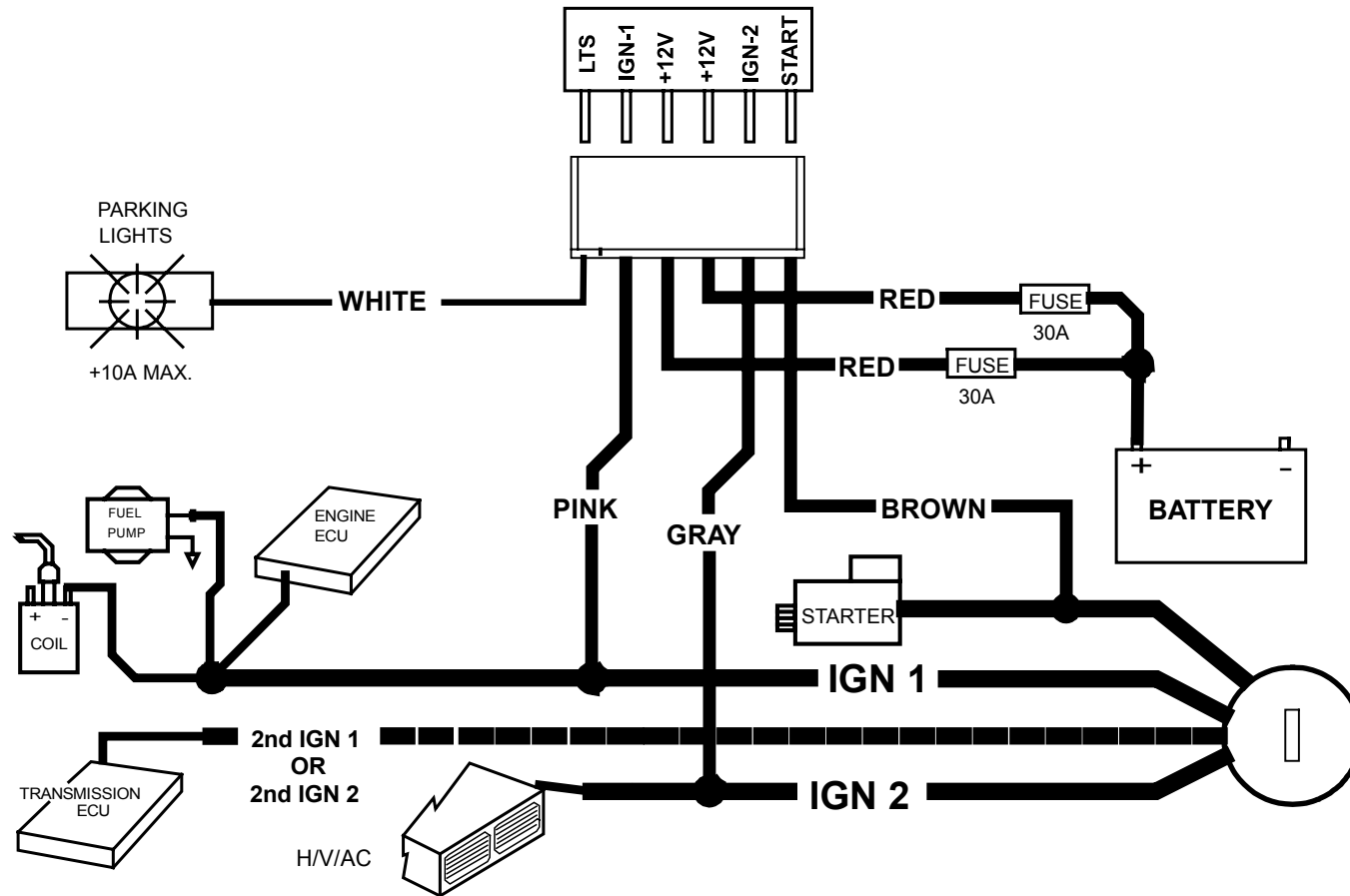
WIRING: HIGH CURRENT CONNECTOR

6 PIN HIGH-CURRENT CONNECTORS:

PIN 1: BROWN 14 GA.:	STARTER OUTPUT (30A)
PIN 2: GRAY 14 GA.:	ACCESSORY / IGNITION 2 (30A)
PIN 3: RED 14 GA.:	BATTERY CONSTANT FUSED (30A)
PIN 4: RED 14 GA.:	BATTERY CONSTANT FUSED (30A)
PIN 5: PINK 14 GA.:	IGNITION 1 (30A)
PIN 6: WHITE 18 GA.:	(+) PARKING LIGHTS (10A)

NOTE: Heavy duty/High Current Ignition circuits greater than 30 AMPS, such as those found on Work or Industrial vehicles, require high-current relays. DO NOT use the outputs of the RS800 Series IV 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.

WIRING: HIGH CURRENT CONNECTOR



“SMART” TACHLESS MODE

This CoolStart system includes a unique voltage monitor called “Smart Tachless” mode that 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 “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) On the rare occasion that “Smart Tachless” mode does not operate satisfactorily, change the voltage reference level as described on the next page, or use the “Tach Reference” mode.

“SMART” TACHLESS MODE

“SMART TACHLESS” ADJUSTMENT:

In the event “Smart 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 90% default point. Raising or lowering this 90% point should increase or decrease your cranking time respectively. The adjustment range is from 80% to 100% in one percent increments. The Default is 90%. Follow steps below to adjust the reference level.

1. Open hood (or ground Gray wire if no hood pin is installed)
2. Turn the key to the ON position
3. Press program button 5 times, after a few seconds the unit will flash the lights 5 times.
4. Carefully press the program button 6 times to option level #6 for voltage reference adjustment. You must get a light flash after each press. If the lights didn't flash, then the unit did not register your button press.
5. Press the Brake pedal to decrease the reference by 1% (lights will flash 1X for each press); Press the Start Button to increase the reference by 1% (lights will flash 2X for each press). The unit will stop providing light flashes when you reach the bottom (80%) or the top (100%) of the adjustment range.
6. Turn Ignition OFF, Close hood (or un-ground the Gray wire) and check operation.

TACH (RPM) REFERENCE MODE & TACH FINDER MODE

Tach Reference Mode provides reliable remote starting performance though engine speed 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 injection solenoids, 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 FINDER mode will assist you in locating a valid tach source. (See Below.)*

TACH FINDER MODE:

This system now includes a Tach Finder mode to assist in locating a valid or viable tach source for your installation. Follow the Tach Finder steps to locate and /or verify a tach signal. If you are already aware of a good Tach source for your vehicle, then you may go directly to TACH PROGRAMMING steps. Note that on vehicles 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 out of the module from the on-board flashing light relay.

TACH FINDER MODE & TACH PROGRAMMING

TACH FINDER (OPTIONAL):

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 flash if the Tach wire is connected to a valid tach source. If lights do not flash, then try a different wire.
5. Once Tach is located then turn off engine and close hood to abort (un-ground Gray wire).
6. See Tach programming below.

TACH PROGRAMMING:

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 4 times. (You must get a light flash after each button press. If the unit did not flash the lights, then it did not register your press.)
6. Tap the Brake Pedal. The unit will read the Tach source and flash the lights once for program confirmation.
7. If lights do not flash once for confirmation, then try another tach source or try the tach finder.

TRANSMITTER PROGRAMMING

Note: All transmitter codes must be learned at time of programming!! The RS800 allows storage of up to 4 different transmitter codes.

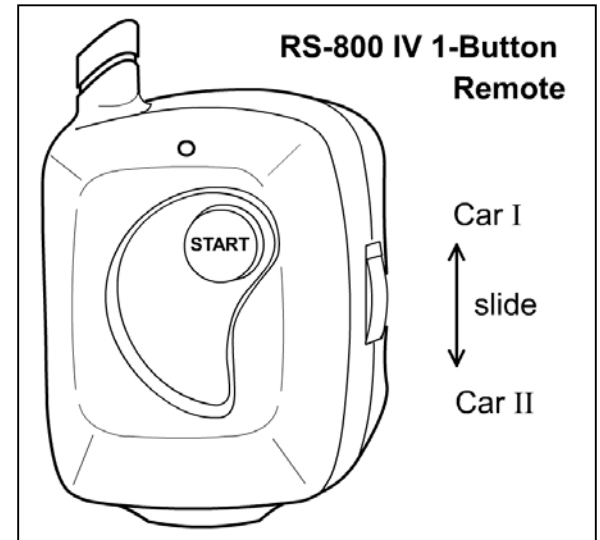
1. Open Hood. (Ground the Gray wire if no hood pin is installed.)
2. Turn key to the ON position.
3. Press Programming button 4 times. After a few seconds, the unit will flash the parking lights 4 times.
4. Press the Start Button of the transmitter to be coded. You should get 2 light flashes indication the unit is waiting for a 2nd code, then press the Start Button of a second transmitter, the unit will flash 3 times indicating its waiting for the 3rd code and lights will flash 4 times for 4th code. If all 4 codes are learned, the unit will automatically exit code-learning mode, otherwise turn key OFF and close hood.

2-VEHICLE OPERATION

The RS-800 IV system can be used for 2-car operation. A single RS800 IV remote control can operate two independent vehicles with RS800 IV systems installed.

SETUP:

1. Using the switch on the side of the remote set your controller to Car II.
2. At Car II: Simply follow the transmitter programming steps listed in the section above. Learn YOUR remote, along with Car 2's existing remotes.



OPTION PROGRAMMING

This system has several installer programmable features as listed in the chart below.

Option Programming:

1. Open hood (Ground the Gray wire if no hood pin is installed).
2. Turn Key to the ON position
3. Press program button 5 times, after a few seconds the unit will flash the lights 5 times.
4. Push the valet/program button [again] the number of times that corresponds to the option number desired. You should get a light flash after each button press. If the unit did not flash the lights, then it did not register your press.
5. When you reach the desired programming level, either Tap the Brake Pedal or Press the Start Button to change the selected option. See the chart on next page for option values and descriptions.
6. Turn Ignition OFF, Close hood and check for changed features.

OPTION PROGRAMMING

*** = DEFAULT**

Option #	Option Description	Option Values	Tap Brake Pedal	Push Start Button
1	NOT USED	NOT USED		
2	NOT USED	NOT USED		
3	NOT USED	NOT USED		
4	Engine Monitoring	Tach (Engine RPM) or Tachless Mode	Tach (Engine RPM)	Tachless*
5	Remote Start Engine Run Time	24 or 36 Minutes	36 Min.	24 Min*.
6	Smart Tachless Voltage Adjust 80-100% (Only when option #4 is set to Tachless)	Tap brake to Decrease 1% or Push Start Button to Increase by 1%	-1%	+1%
7	Option reset			Reset to Default

OPTIONS DESCRIPTIONS:

OPTIONS #1-3 ARE NOT USED.

4. Engine Monitoring:

This option sets how the system 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 page 7 for more information.

5. Remote Start Run Time:

This option controls the engine run time for remote start. You can select either 24 or 36 minutes.

6. Smart Tachless Voltage Adjustment:

This option controls the voltage reference point when using Smart Tachless mode. Either tapping the brake or pressing the Start button on the remote raises or lowers the reference level in 1% increments from 80%-100%. The default voltage setting is 90%, which works well for most vehicles. See page 6 for additional Smart Tachless mode information.

7. Option Reset:

This option allows you to restore all programmable options to factory default values. Go to the 7th option and press the Start Button on the remote. The unit will flash the lights 2 times and all values will be reset to Default.

REMOTE START TROUBLESHOOTING

UNIT FLASHES LIGHTS ONCE AND WILL NOT ATTEMPT A START:

The unit is in Valet mode. Turn IGN ON, press and hold valet/programming button for about 5 seconds until LED goes out. The unit is now out of valet mode and should perform a remote start.

UNIT FLASHES LIGHTS TWICE AND WILL NOT ATTEMPT A START:

The unit reads 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.

UNIT CRANKS VEHICLE BUT ENGINE NEVER STARTS:

1. 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 and later vehicles include some type of Anti-Theft system which may require a bypass module. Bypass modules are sold separately.
2. 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:

1. Many 1995 and later 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.
2. Some Vehicles (Commonly Nissan) require 2 Start (Cranking) circuits for the vehicle to run properly. If this is the case, then an additional relay must be installed (triggered off of the BROWN start output wire). Connected to the Extra start relay output to the extra start wire in the vehicle. Secondary starter wire may be a smaller wire than the primary starter wire.

NO RESPONSE FROM REMOTE TRANSMITTER:

1. Check for proper power/ground wiring connections.
2. Check Antenna Module connection. The antenna module included with this system must be plugged in to allow the unit to send/receive signals.
3. The Remote Transmitters may need to be reprogrammed to operate the system. See Transmitter programming.
4. Remote Transmitters may be damaged or need new batteries.

