

CS-2011RS Series III / CS-2015FM Super Rage™ The Informer™

INSTALLATION INSTRUCTIONS

INTRODUCTION

Congratulations on your choice of a Crimestopper combo alarm & remote engine starter! This installation Handbook covers the following models: CS2011RS Series III & CS2015FM Informer 2-Way FM paging system.

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 GUIDLINE 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.

TECHNICAL SUPPORT (800)-998-6880 Monday - Friday 8:00am - 4:30pm Pacific

Website: www.crimestopper.com E-mail: email@crimestopper.com

CRIMESTOPPER SECURITY PRODUCTS, INC. 1770 S. TAPO STREET SIMI VALLEY, CA. 93063 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.

TABLE OF CONTENTS

Pre-Installation Considerations	2
Cautions & Warnings	3
Component Mounting	3
Wiring Information	4-10
Power Door Lock Wiring, Systems & Diagrams	10-13
Smart Tachless, Tach Reference, Tach Finder, Timed Crank Mode	14-16
Diesel Glow Plug Delay	17
Programmable Options	17-21
Remote Transmitter / Transceiver Programming (CS-2011RS & CS-2015FM)	
Alarm Trigger Diagnostics	22
2 Vehicle Operation	23
Remote Start Troubleshooting	24
Jumper Pin Diagram	25
Antenna Diagram	26
System Wiring Diagram	27

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 A 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 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.

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.*

ANTENNA MODULE: For optimum range and performance, the antenna/receiver module 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.

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 red 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: 9-PIN Connector

Green: (-) Start Activation Trigger Input

This wire allows an outside source or accessory to activate a Remote Start. A 1-second Ground pulse on this wire will trigger a remote start. This wire can be used with optional accessories such as RS400 temperature module.

Brown: (+) Siren Output

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

Brown/White: (-) 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, then 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 terminals 86 +12V Constant. Connect terminal 87 to Chassis Ground and Connect Terminal 30 to the Negative dome light activation circuit.

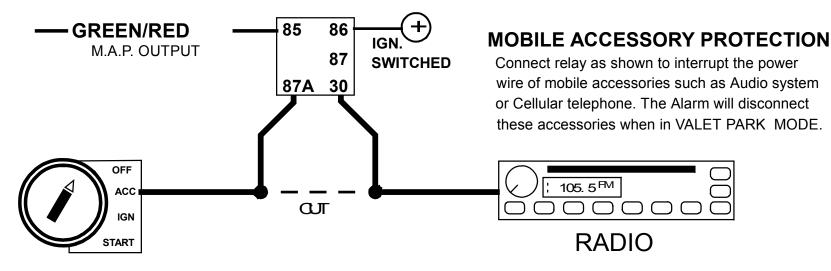
Positive Dome Light System: Connects to terminal 85 of a relay. Connect terminals 86 & 87 to +12V Constant. Connect terminal 30 to the Positive dome light activation circuit. On some vehicle with a single, small dome light and Negative door trigger circuit, this wire may be connected directly to door Negative Door trigger wire HOWEVER, we recommend the use of a relay to protect from shorting the circuit

Green/Red: Remote Aux. Output 1 OR MAP-Mobile Accessories Protection (Optional, requires relay)

This is a programmable output that can operate two different ways: 1. (DEFAULT) A Remote Auxiliary Output that provides a ½ Second (-) Negative pulse when Button #3 is pressed to open a Factory power trunk or hatch release. It can function as an MAP output that provides a continuous (-) Negative output when in the system is put into VALET PARK MODE. M.A.P. can be used to interrupt power/accessory wiring to prevent unauthorized access of the vehicle's audio or entertainment systems when Valet Park mode is ON. See Mobile Accessories Protection Diagram on Next Page.

WIRING: 9-PIN Connector

MOBILE ACCESSORY PROTECTION:



Blue/Black: (-) IGNITION OUT or REMOTE AUX. Output #2 (Programmable, See Programmable Option #17)

This wire functions as a Negative IGNITION OUTPUT (Ground while Remote Starting) for use when connecting factory Security Bypass modules or when an additional external Ignition Relay is required for your installation. This wire can be programmed to function as an AUXILIARY OUTPUT #2 providing a momentary (-) Negative output when Button #3 (Trunk) is pressed and held for more than 2 seconds. The Aux Channel #2 output stays on as long a the button is held down. Connect to the Negative activation circuit of an auxiliary module or device.

Blue/White: (-) Passenger Door Unlock Output (Optional, requires relay)

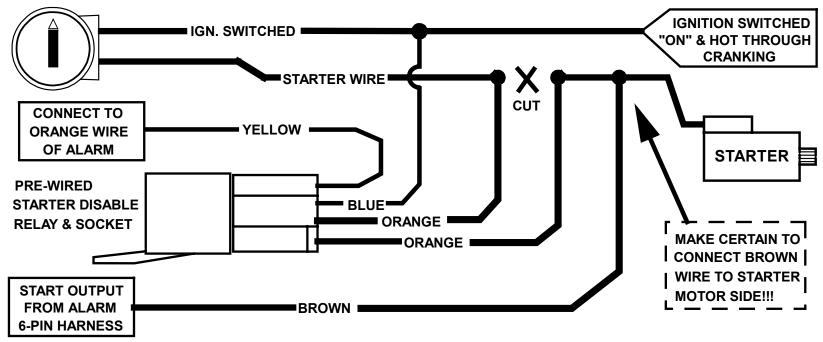
This wire activates when the unlock button on the remote is pressed a second time upon disarming. This wire is used for the Optional Separate Driver's/Passenger Unlock feature. Connects to unlock circuit for passenger door or doors. See DOOR LOCK WIRING for special configuration options.

Orange: (-) Negative 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 blue wire of the relay socket to the Ignition switched wire on the vehicle. Cut the vehicle starter wire and connect each half to an Orange 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. See starter disable diagram on next page.

WIRING: 9-PIN Connector

STARTER DISABLE:



Orange/Black: (-) OEM Disarm Output

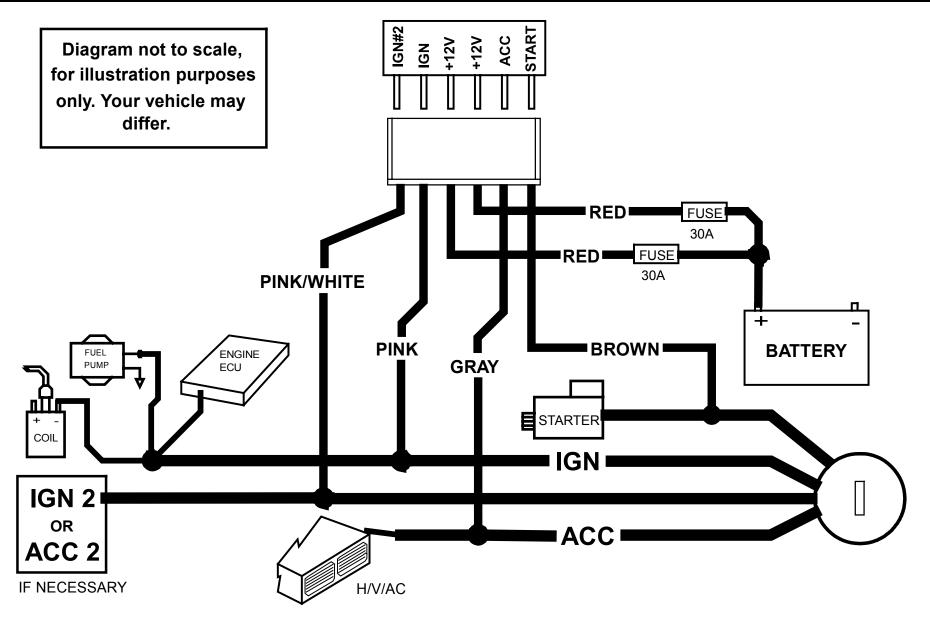
This wire provides a Ground pulse to disarm vehicles' Factory anti-theft system prior to a Remote Start. Connect this wire to the vehicles' anti-theft disarm wire. This wire is sometimes found coming off the Driver's door key switch or at the Factory Anti-theft control module.

WIRING: 6-PIN High Current Connector

PIN 1: BROWN:STARTER OUTPUT (30A Max.)PIN 2: GRAY:ACCESSORY (HEAT/AC) (30A)PIN 3: RED:+12V POWER INPUT (BATTERY) FUSED (30A)PIN 4: RED:+12V POWER INPUT (BATTERY) FUSED (30A)PIN 5: PINK:IGNITION 1 (30A Max.)PIN 6: PINK/WHITE:IGNITION or ACCESSORY #2 OUTPUT (30 Max.)

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.

WIRING: 6-PIN High Current Connector



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.

WIRING: 3-PIN Connector

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 Reference Section on Pg. 13 for more information.

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 and paint or debris from ground location.

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 move the jumper from (+) to (-). See Jumper Pin Diagram. Some European vehicles require separate left and right circuits. Use a dual relay or diodes to isolate the output.

NOTES: (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.

WIRING: 5-PIN Connector

Violet: (+) Door Pin Switch Input

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.

Green: (-) Door Pin Switch Input

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.

Blue: (-) Hood/Trunk Pin Switch Input

Input trigger for a grounding hood or trunk pin switch. Connect to existing hood and 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.

WIRING: 5-PIN Connector

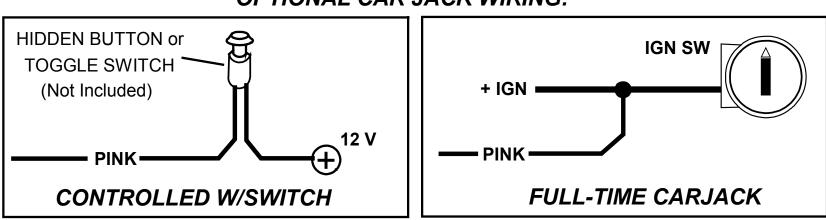
Pink: (+12V) +/- Diesel Glow Plug Input or Car Jack Input (Programmable Input Wire)

+/- Glow Plug Input (Diesel Vehicles Only)

Connect Pink wire to indicator circuit that shows a (- or +) Signal while the "WAIT TO START LAMP" is on. When this wire is used, the CS2011RS/2015FM system will wait until light turns off before attempting a remote start. Note: This input is jumper selectable for Positive or Negative type signals. See Jumper Pin diagram for jumper configuration.

Carjack Trigger

When using Carjack protection, connect this Pink wire to a toggle switch, or positive door trigger or ignition depending on your level of Carjack protection. When +12V is applied to this wire, *with the IGN on, then Carjack is armed*. If a door is opened then closed, a Carjack countdown will begin. See Diagram Below for wiring configurations. DO NOT connect the Pink Carjack wire to Ignition unless there is extreme danger of a Carjack. When using the Ignition, Carjack is armed all the time and must be reset each time a door is opened and closed.



OPTIONAL CAR JACK WIRING:

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

Mount LED in a visible location in 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 Shock Sensor (22 Gauge wires)

4 Pin Plug - Sensor Plug 22 Gauge :

White Wire:(-) Negative TriggerBlue Wire:(-) Negative Warn AwayBlack Wire:(-)Sensor GroundRed Wire:+12Volt Sensor Power

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.

Sensor Adjustment

Adjust the main shock sensor with the small White dial. Clockwise will increase sensitivity and counter-clockwise will decrease sensitivity. Adjust Pre-Warning level with small Black dial.

DOOR LOCK WIRING: 3-PIN Harness (22 gauge wires)

GREEN: (-) LOCK / (+) UNLOCK BLUE: (-) UNLOCK / (+) LOCK RED: +12V Coil Power for external relays

HINT: With Reverse Polarity systems or when adding Door Lock Actuators, relays or a relay module is required.

DETERMINING DOOR LOCK TYPE: We recommend determining the type of locking system the vehicle has before connecting any wires. Incorrect connection could result in damage to the alarm and/or the vehicle's locking system. We have provided a brief description and test procedure for common door locking systems under "DOOR LOCK SYSTEMS page 10.

COMMON DOOR LOCK TYPES: (SEE NEXT PAGE FOR DESCRIPTIONS)

Negative Trigger (-):	Many Imports, Late Model Ford & General Motors
Positive Trigger (+):	Many GM, Chrysler/Dodge/Plymouth models:
Reverse Polarity:	Many Ford/Lincoln/Mercury, Dodge/Chrysler/Plymouth,
-	and some GM Full-size Trucks
Single Wire Systems:	Late /Chrysler/Dodge/Plymouth models:
	95-UP Stratus, Cirrus, Breeze, 96-UP Caravan
	Voyager, Town & Country; 90-97 Ford Probe; Mazda
Semi Automatic:	Older Saab and Volvo, Isuzu, Hyundai
Electric Vacuum:	Many mid 1980's through mid 1990's European makes

Crimestopper Doorlock Accessories:

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

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

DOOR LOCKING SYSTEMS

NOTE: This door lock information is provided as a guide. Your particular vehicle may differ.

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. Testing with a Volt/Ohm meter or Digital Volt/Ohm Meter (DVM): Attach the red lead to a +12Volt constant power source. Use the Black lead as your testing probe and find the wires that cause the meter to show +12.0 Volts when the lock and unlock buttons on the door panel are pressed. The Negative lock/unlock outputs of this alarm system can be directly interfaced to the lock/unlock wires for most vehicles with Negative type systems.

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. Testing with a Volt/Ohm meter or Digital Volt/Ohm Meter (DVM): Attach the Black lead to Chassis ground (Vehicle body metal). Use the Red lead as your testing probe and find the wire that causes the meter to show +12 Volts when the lock button on the door panel is pressed.

Reverse Polarity: Many Ford/Lincoln/Mercury/Dodge/Chrysler/Plymouth and 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 happen. Reverse Polarity system require external relays or a relay module.

Single Wire (Dual Volt): Ford Probe 1990-97, 1995-UP Chrysler Minivans/Stratus/Cirrus, some 2000-UP GM

Dual voltage systems have lock/unlock switches that send varying amounts of Positive voltage OR Negative ground current through resistors to 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 external relays or a relay module and resistors.

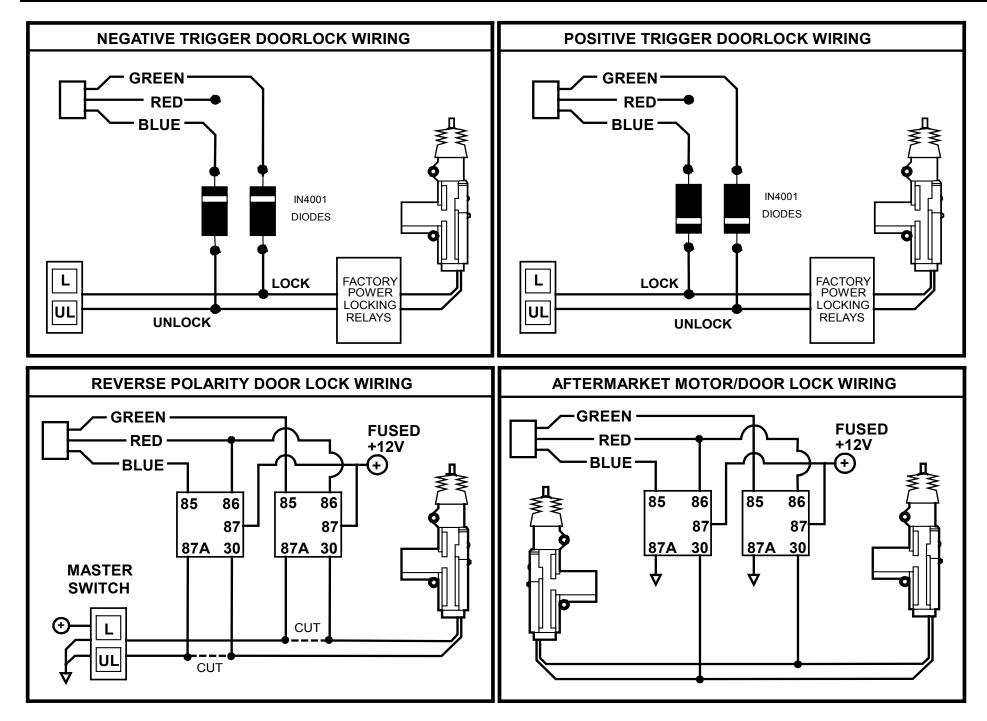
Semi Automatic: European makes and some Imports Saab, Volvo, Isuzu, Hyundai

Semi Automatic systems use a power lock control for all doors EXCEPT the Driver's door. The only way to control lock/unlock on this type of system is to lock or unlock the Driver's door. There are also NO Lock/Unlock buttons or switches present in this type of system. The only way to gain control of a Semi Automatic system is to install a door lock Actuator (motor) in the Driver's door. The Actuator will electronically control the drivers for lock and unlock which will cause all doors to now lock and unlock with the alarm. Actuators are available from Crimestopper (Part # CS-610S1) at a low cost. Installing actuators can be difficult and time-consuming. (Varies from vehicle to vehicle.)

Electric Vacuum Pump: Mid 1980's through Mid 1990's European Makes (Mercedes, Audi)

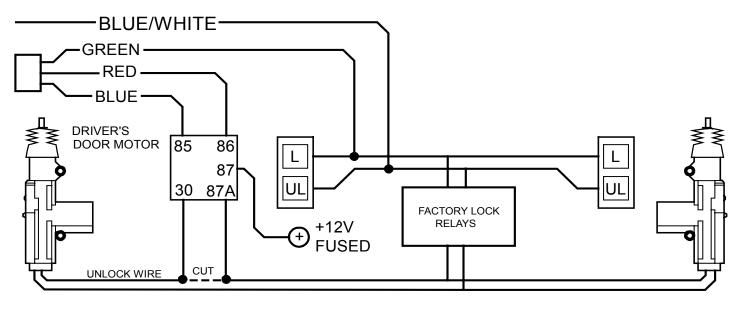
These systems use vacuum-operated mechanisms to lock/unlock the doors from a central pump usually located in the trunk. This system can be controlled via the vacuum pump control wire and 2 relays. In some cases, you can also control vacuum systems by adding and actuator to the driver's door as in Semi-Automatic Systems.

DOOR LOCK WIRING

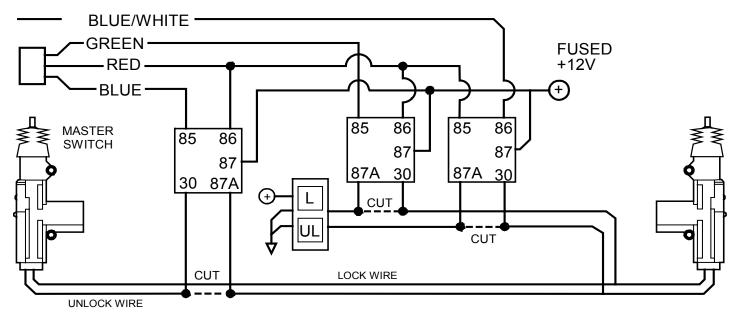


SEPARATE DRIVER'S DOOR UNLOCK WIRING

NEGATIVE TRIGGER DOOR LOCKS



WIRING FOR REVERSE POLARITY DOOR LOCKS



SMART TACHLESS MODE

Both the CS2011RS & CS2015FM include a Tach-less engine monitor called "Smart Tachless" mode. When in "Smart Tachless" mode, the module actively monitors the vehicle's voltage reference each time a remote start is performed. Smart Tachless mode will adjust itself to maintain optimum efficiency over the life of the life of the installation.

No Tach wire is required for Smart Tachless mode. The Smart Tachless system works from the existing +12V power connection of the unit.

DO NOT USE or CONNECT WHITE/RED TACH WIRE FOR SMART TACHLESS MODE!

SMART TACHLESS JUMPERS: (Remove Access Door on top of module)

The purpose of the jumpers is to reduce the starter cranking time [if needed] when in **"Smart Tachless"** mode only. To shorten the crank time by one percent remove jumper #P2. Test the unit and see if the decrease is correct. If a shorter crank time is still required, then remove Jumper #P1, which will reduce the cranking time by another percent. Test the unit and see if the decrease is correct. These are the only two "Smart Tachless" adjustments.

IMPORTANT SMART TACHLESS NOTES:

- (1) Smart Tachless Mode is **NOT** guaranteed to work on **EVERY** vehicle. Occasionally, older vehicles, Dual-Battery Systems, or out-of-tune vehicles will not operate properly in Smart Tachless Mode.
- (2) SMART TACHLESS RESET INFORMATION: When using the Smart Tachless mode, it is critical the system receives a good voltage reference from the vehicle. If your vehicle was just recently driven into the shop and has a fully charged battery, or you have attempted many remote starts in a row, you may need to reset the system's voltage reference for proper Smart Tachless performance. RESET PROCEDURE: Remove the 2 in-line fuses on the Power Leads, turn the vehicle's headlights on for 4 minutes, turn off headlights, and re-install fuses.
- (3) If Smart Tachless Mode will not work for your vehicle, use the Tach Reference Mode, or Timed Crank Mode.

TACH (RPM) REFERENCE MODE & TACH FINDER FEATURE

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: 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. Use the TACH FINDER feature to locate a valid tach source.*

TACH (RPM) REFERENCE MODE & TACH FINDER FEATURE

TACH FINDER FEATURE:

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. When following the steps, the unit will begin to flash the parking lights if you have the White/Red wire connected to a valid 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 out of the module from the on-board flashing light relay.

TACH FINDER:

- 1. Open hood (or Ground the Blue 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 White/Red wire is connected to a valid tach
- 5. Once Tach is located then turn off engine and close hood to abort.
- 6. See Tach Reference programming below.

TACH PROGRAMMING:

- 1. Open hood (Or Ground Blue wire if no hood pin installed.)
- 2. Connect WHITE/RED wire to a valid Tach source.
- 3. Start engine with key.
- 4. Press program button 5 times, then wait for 5 light flashes.
- 5. Wait at least one second then push program button again (1) time, you should get a light flash with the button press. This unit is now at option #1-Tach Learning.
- 6. Press the #2 Unlock Button on remote transmitter. The unit will read and program the Tach source. The lights will flash twice for confirmation.
- 7. If lights do not flash twice for confirmation, then try another tach source or try the tach finder.

NOTE (1): The Tach Signal locations suggested on the bottom of page 14 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. The CS-2011RS/2015FM may not detect a clean signal. If you are unable to locate a Tach Source, use the "Smart Tachless" or "Timed Crank" mode.

NOTE (2) The CS2011RS/2015FM will operate in "Smart Tachless" Mode [by default] unless a Tach Reference has been programmed. Once a Tach source is programmed, the unit will automatically operate in Tach Mode.

TIMED CRANK MODE

This new feature provides an easy method of starting the vehicle without locating an exact tach wire. It uses a timed cranking output combined with the use of the Red/White tach wire as an engine ON/OFF monitor. The Red/White Tach wire must still be used in this mode of operation. THIS FEATURE MUST BE PROGRAMMED BEFORE USE! THERE ARE 2 LEVELS of programming required: First, set the system for "Timed Crank" operation, and secondly you may need to adjust the amount of cranking time. There are 4 different crank times available for use. SEE OPTION PROGRAMMING CHART FOR SETTINGS.

HOW TO USE THIS FEATURE:

- 1. Go to the "Programmable Options" section, and turn ON Option #16 "Timed Crank". (It is normally on Tach Monitor)
- 2. With "Timed Crank" turned ON, you will STILL have to connect the Red/White Tach wire to a tach source on the engine. The Red/White Tach wire becomes a simple "Engine Monitor". Although the unit will not be using the Red/White wire to start the motor, it will be using this wire to determine whether the motor is running or not. This is a mandatory connection. A "crude" or "less exact" tach source can be used only when in "Time Crank" mode.
- 3. Using the vehicle key, start the engine a few times to get a "feel" of how long the cranking time is. Once the "Timed Crank" mode is turned on, the default cranking time is set to a default of 0.50 seconds. We recommend beginning with this setting. Try a remote start and see if the cranking is appropriate for your vehicle
- 4. If 0.50 seconds is not an appropriate starter cranking time, then go to Programming Option #18 and change the crank time setting to a longer value. The values are as follows: 0.5, 0.75. 1.25, and 1.5 seconds.

WARNING: This method of starting the vehicle is not as reliable as using regular "Tach" mode. This method should be used only in the event that a tach wire can not be located using the normal tach programming and tach finder. When using this method, there may be certain operating anomalies requiring seasonal adjustments. These are, but not limited to:

- Starter may under-crank in extreme cold weather. Vehicle may not start on 1st attempt and may require a 2nd or 3rd try.
- In warm weather when your vehicle may start very quickly, "Timed Crank" mode may tend to over-crank the starter.
- The only way to correct the above issues is to go to the Option #18 and adjust the cranking time.
- When in "Timed Crank" mode, the cranking time can only be adjusted manually through option #16. When the CS2011/2015FM system is in Smart Tachless or Regular Tach Reference mode, cranking time is adjusted automatically.

DIESEL GLOW PLUG DELAY

This new feature provides a solution for diesel vehicle without having to connect to the Glow Plug-"Wait to Start Circuit". This may be due to a variety of reasons. If your vehicle does not have a viable "Wait to Start Circuit", or you cannot locate and identify the circuit, then change your system to "Diesel Glow Plug Delay" mode. You can choose from a selection of "pre-cranking" delay times. Once this mode is activated, the CS-2011RS/2015FM 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, 20, or 30 seconds. SEE OPTION PROGRAMMING CHART.

HOW TO USE THIS FEATURE:

- 1. See the "Programmable Options" section and change Option #19 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 CS-2011RS/2015FM system will wait for the selected time before cranking the engine.

PROGRAMMABLE OPTIONS

This system has many installer programmable features as listed in the chart on following pages.

To Engage Option Programming:

- 1. Open hood (ground the Blue wire if no hood pin switch is installed)
- 2. Turn Key to the ON position
- 3. Press program / valet 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 (1 thru 20). You must get a light flash after each button press. See chart on next page for option list.
- 5. When you reach the desired programming level, Press button #1(Lock) or #2 (Unlock) to change the option. (Options 17, 18, and 19 have selections for all 4 transmitter buttons.)
- 6. Turn Ignition OFF, Close hood and check for changed features. Change each option individually repeating #1-5.

PROGRAMMABLE OPTIONS TABLE

(* = Default)

Option #	Option Description	Option values	Lock Button #1	Unlock Button #2
1	Tach Learning	See Tach Programming		Learn Tach
2	Autolock with Ignition	ON or OFF.	OFF	*ON
3	Passive Arming	ON or OFF	ON	*OFF
4	Active Re-Arm	ON or OFF	ON	*OFF
5	Passive Locks	ON or OFF	ON	*OFF
6	Parking Lights on w/Disarm	ON or OFF	OFF	*ON
7	GREEN/RED Wire function	Trunk POP or M.A.P. output	M.A.P.	*Trunk Pop
8	PINK Wire function	Glow Plug or Carjack Trigger	Carjack	*Glow Plug
9	Siren Chirps on Remote Start	ON or OFF	OFF	*ON
10	Disarm on Trunk pop	ON or OFF	OFF	*ON
11	Open Door Warning	5 Sec. or 60 Sec.	5 Sec.	*60 Sec.
12	Door Lock Pulse Time	0.75 Sec. or 3.0 Sec.	3 Sec.	*0.75 Sec.
13	Double Unlock Pulse	1 or 2 Unlock pulses	2 Pulses	*1 Pulse
14	Lock During/After Remote Start	ON or OFF	OFF	*ON
15	NOT USED	NO OPTION	N/A	N/A
16	Timed Crank Mode or Tach	Timed Crank: Pre-Set	Pre-Set	*Tach Monitor
	Monitor	Cranking or Tach Monitor		
17	Blue/Black Wire Function	(-) IGN or AUX #2	AUX #2	*(-) IGN
18	Starter Cranking Time	Button #1 = 0.75 Sec	0.75 Sec.	*0.5 Sec.
	-	Button #2 = 0.5 Sec.		
		Button #3 = 1.25 Sec.		
		Button #4 = 1.5 Sec.		
19	Diesel Glow Plug Delay	Button #1 = 10 Sec.	10 Sec.	*Monitor Glow
		Button #2 = Monitor Glow Plug		Plug
		Button #3 = 20 Sec.		
		Button #4 = 30 Sec.		
20	Remote Start Engine Run Time	Button #1 = 12 Min.	12 Min.	*24 Min.
		Button #2 = 24 Min.		
		Button #3 = 36 Min.		
		Button #4 = 48 Min.		
21	Option reset	Button #2 Only		Reset options

PROGRAMMABLE OPTIONS

1. TACH LEARNING

This option has no values or default settings. See Tach (RPM) Reference Mode Section on pages 13-14.

2. AUTOLOCK/UNLOCK W/IGNITION

Controls whether the doors will automatically lock when the ignition is turned on and will unlock when the ignition is turned off. *Doors will not lock if they are open to prevent locking the keys in*.

3. PASSIVE ARMING

With this option ON, the unit will arm itself 30 Seconds after the ignition is turned off and the last door has been closed. Lights will flash twice when last door is closed indicating passive countdown. If a door is reopened, the system will wait and begin countdown again when closed.

4. ACTIVE RE-ARM

Active Re-arming allows the system to re-arm itself 30 seconds after disarmed with the transmitter if a door has not been opened. This is handy if the vehicle is accidentally disarmed without your knowledge.

5. PASSIVE LOCKS

This option controls whether the doors will lock when Passive Arming occurs. Note: This may increase the risk of locking keys in the vehicle.

6. PARKING LIGHTS ON WITH DISARM

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

7. GREEN/RED WIRE PROGRAMMING: TRUNK POP (AUX 1) or M.A.P. OUTPUT

This option controls whether the system's GREEN/RED wire functions as Remote Aux. Output 1, or functions as an Output for (MAP) Mobile Accessories Protection. Mobile accessory protection activates only in Valet Park Mode. See Wiring Section page 4 for specific details and a diagram.

8. PINK WIRE PROGRAMMING: 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 and for Carjack this wire can be connected to a hidden button, switch, or a (+) Positive door pin circuit.

9. SIREN CHIRPS WITH REMOTE START ACTIVATION

This option controls whether the system gives 3 short siren chirps when engaging a remote start.

PROGRAMMABLE OPTIONS

10. DISARM WITH TRUNK POP (AUX. OUTPUT 1)

Controls whether the system will or will not DISARM when the trunk pop or AUX. feature is used. When the feature is turned on the unit will DISARM when opening trunk or using an auxiliary device controlled by the Gray wire.

11. 10/60 Sec. OPEN DOOR WARNING

This setting changes the delay time in which the alarm system begins to monitor the Door circuit. This option can prevent the alarm from giving warning chirps on vehicles with a delayed dome light.

12. DOOR LOCK/UNLOCK PULSE TIME

This option controls the amount of time (0.75 sec. or 3 sec.) for the lock/unlock pulse. The standard pulse time for most vehicles is 0.75 Sec. The 3 sec. setting may be required for Mid 1980's through Mid 1990's European Vehicles that require a long lock and unlock pulse to operate Vacuum door lock systems.

13. DOUBLE UNLOCK PULSE

With this option ON, the unit will send 2 unlock pulses when the system is disarmed. This feature may be required for interfacing a Factory alarm or keyless entry system.

14. LOCK DURING/AFTER REMOTE START

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

15. NO OPTION / NOT USED

16. TIMED CRANK or TACH MONITOR MODE

This option controls whether the system uses a tach wire to control the starter or uses a pre-set cranking time.

17. BLUE/BLACK WIRE PROGRAMMING: (NEG.) IGNITION OUTPUT or AUX #2 OUTPUT

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

18. PRE-SET STARTER CRANKING TIME: (Requires Option #16 in "Timed Crank" Setting)

This option controls the starter output cranking time when "Timed Crank" Mode is turned on. Choices are 0.5, 0.75, 1.25, or 1.5 seconds.

19. 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, 20, 30 seconds, or Monitor Pink Wire (Default).

20. REMOTE START ENGINE RUN TIME: Set engine run time for 12, 24, 36 or 48 minutes as desired.

PROGRAMMABLE OPTION RESET

This system provides a "reset method" to restore all options to FACTORY DEFAULT VALUES as listed in the "Button #2" column of the programmable option chart on page 18. This can be helpful if you have lost track of the option settings on your system or when you are moving systems from car to car.

- 1. Open hood (ground the Blue wire if no hood pin is installed)
- 2. Turn Key to the ON position
- 3. Press program / valet button 5 times, after a few seconds the unit will flash the lights 5 times.
- 4. Push the valet/program button 21 times. Press carefully, do not lose count! You must get a light flash each time you press the button. If the unit didn't flash the lights, then it did not register your press.
- 5. Press button #2 (Unlock) to reset the options.
- 6. Turn Ignition OFF, Close hood (un-ground Blue wire). All features should be set at *DEFAULT values.

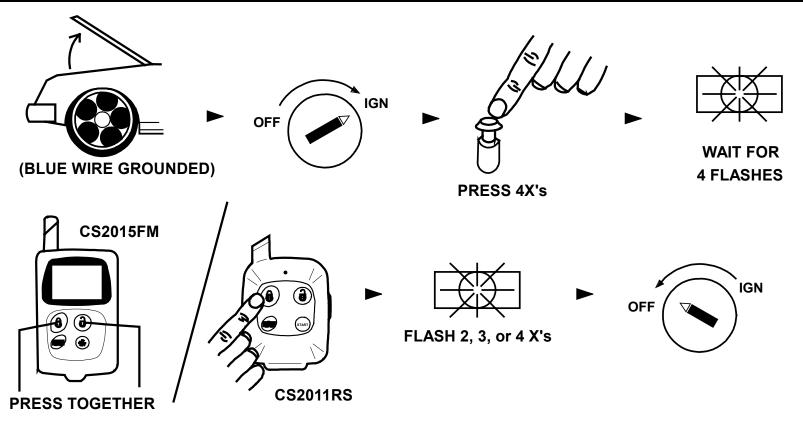
PROGRAMMING – CS-2015FM TRANSCEIVER / CS-2011RS TRANSMITTER

NOTES: The CS2015FM will only learn LCD Transceiver Remotes and the CS2011RS will only learn 4 button CoolGlow™ transmitters! The remote controls for these systems are not interchangeable. Remote Transmitters/Transceivers 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.

- 1. Open Hood (Ground the Blue wire if no hood pin is installed.)
- 2. Turn key to the ON position. (Doors will lock if Autolock is programmed)
- 3. Press Programming button 4 times, then after a few seconds the unit will flash the parking lights 4 times.
- 4. For the CS2011RS: Press button #1 (Lock) of the transmitter, for the CS-2015FM: Press Buttons #1 & 2 together. You should get 2 light flashes indication the unit is waiting for a 2nd code, then press button #1 of a second transmitter or transceiver, 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.

DIAGRAM ON NEXT PAGE.

PROGRAMMING – CS-2015FM TRANSCEIVER / CS-2011RS TRANSMITTER



ALARM TRIGGER DIAGNOSTICS

The CS-2011RS and CS-2015FM systems include 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:

Shock Sensor Violation = 1 Flash	Door Violation = 2 Flashes
Hood/Trunk = 3 Flashes	Ignition Violation = 4 Flashes

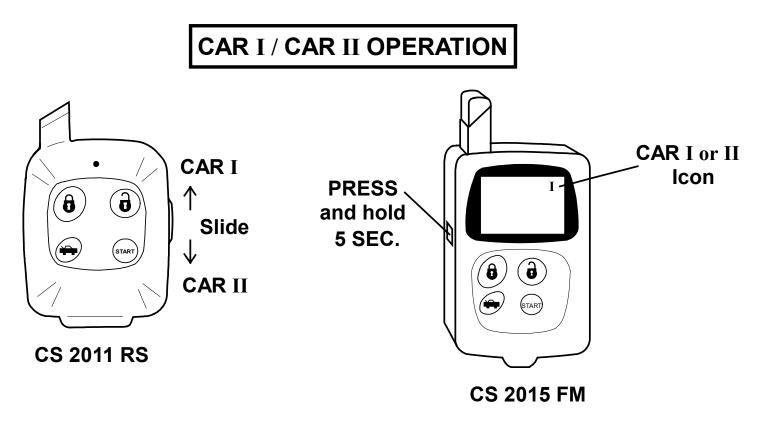
Diagnostics will reset when the Ignition is turned on or when the system is re-armed.

2-VEHICLE OPERATION

Both the CS-2011RS and CS-2015FM systems can be used for 2 car operation. A single CS-2011RS remote can control two independent vehicles with CS-2011RS systems installed. A single CS-2015FM transceiver remote can operate two independent cars with CS-2015FM systems installed.

NOTE: These systems ARE NOT interchangeable. A CS-2011RS system CANNOT operate a CS-2015FM system and vice versa!

See diagram below on how to switch your remote to car 2 operation. Once you switched your remote to Car 2, then follow the transmitter programming steps on the second vehicle and learn YOUR remote, along with Car #2's existing remotes.



REMOTE START TROUBLESHOOTING

UNIT FLASHES THE LIGHTS ONCE AND WILL NOT ATTEMPT A REMOTE START: (3 parts)

- 1. The system may be in Valet mode. Check the systems LED light and if it is on solid Red LED (with doors closed) then the system is in VALET mode. To exit VALET, turn the Ignition on, press and hold valet/programming button for about 5 seconds until LED goes out. Unit is now out of valet mode and should perform a remote start.
- 2. The system may sense a fault at the Brake (White wire is active) check installation for faults and verify the +12V Brake input is not active unless the brake is pressed.
- 3. The system may sense a fault if the vehicle hood is up or open (Blue wire grounded). [Assuming you are using a grounding hoop pin or switch that is connect to the Blue wire of the system. This is a safety feature of the unit. Make sure hood is closed or there is no short on the Blue hood pin wire.

ENGINE CRANKS VEHICLE BUT VEHICLE NEVER STARTS: (2 parts)

- 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, 2000 and Later vehicles may include some type of Anti-Theft system. Check vehicle owner's manual to see if the vehicle equipped with a security system.
- 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 Toyota vehicles where (2) Ignition "ON through cranking" wires are required.

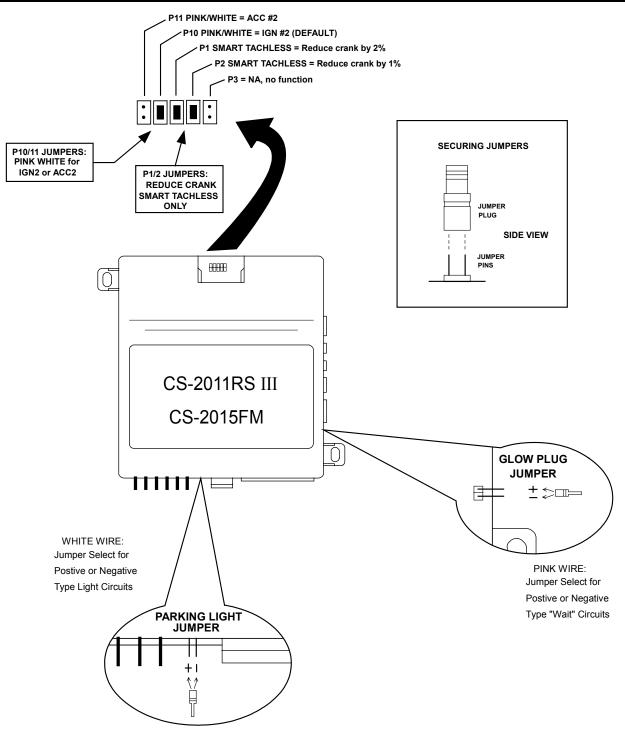
VEHICLE STARTS BUT CHECK ENGINE LIGHT COMES ON OR ENGINE RUNS BADLY: (2 parts)

- 1. Some 1990's and Later GM cars/trucks require a secondary ignition circuit for the Transmission computer. If the vehicle is started without this wire energized, the vehicle will display a "Check Engine" or "Service Engine" light on the dash. This may cause transmission damage if the vehicle is driven. Be sure to check for any additional WHITE (or GREEN) Ignition wires on GM cars and trucks that power up when started with the key.
- 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 with the output connected to the extra starter wire in the vehicle.

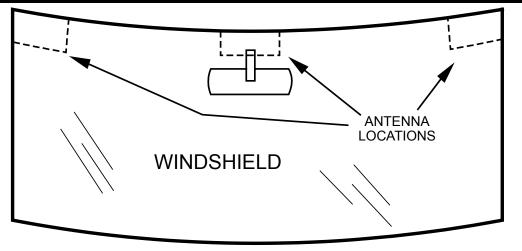
NO RESPONSE TO REMOTE: (4 Parts)

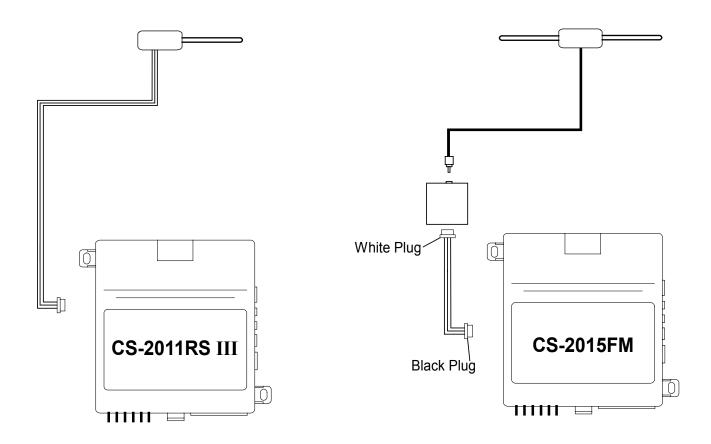
- 1. Check for proper power/ground wiring connections.
- 2. Check Antenna Module connection. The antenna included with this system must be plugged in to send/receive signals. Antenna Module gets voltage from the control module.
- 3. The Remotes may need to be reprogrammed to operate the system. See Transmitter programming.

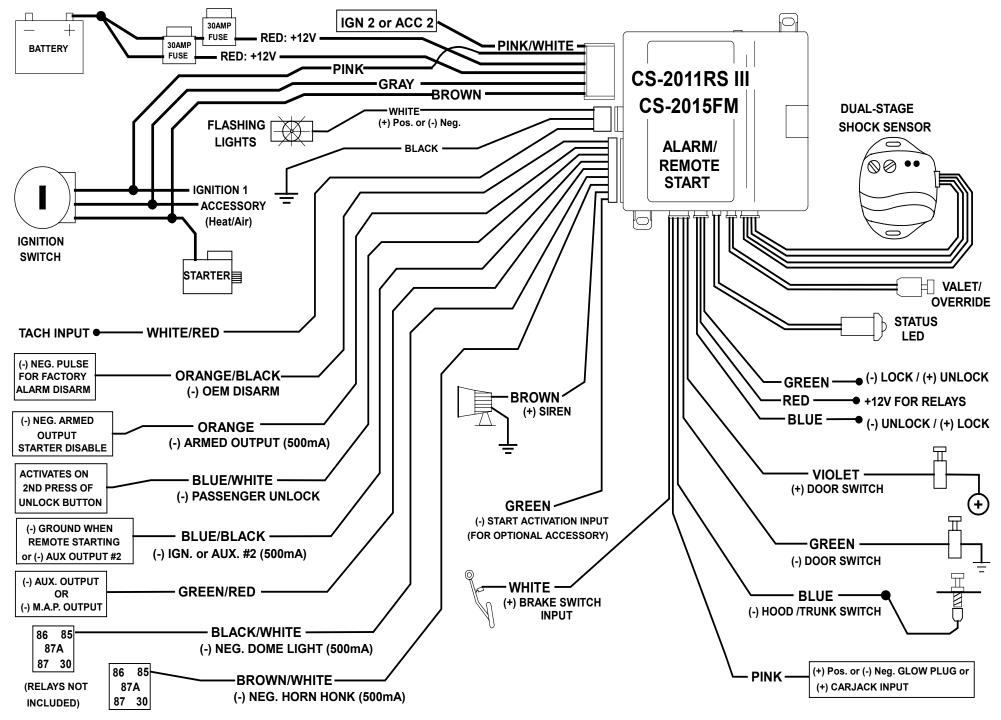
JUMPER PIN DIAGRAM



ANTENNA DIAGRAM







SEE PAGES 4-13 FOR DETAILED WIRING INFORMATION!