DELUXE 200
REMOTE ENGINE STARTER
WITH KEYLESS ENTRY SYSTEM
INSTALLATION MANUAL

INTRODUCTION

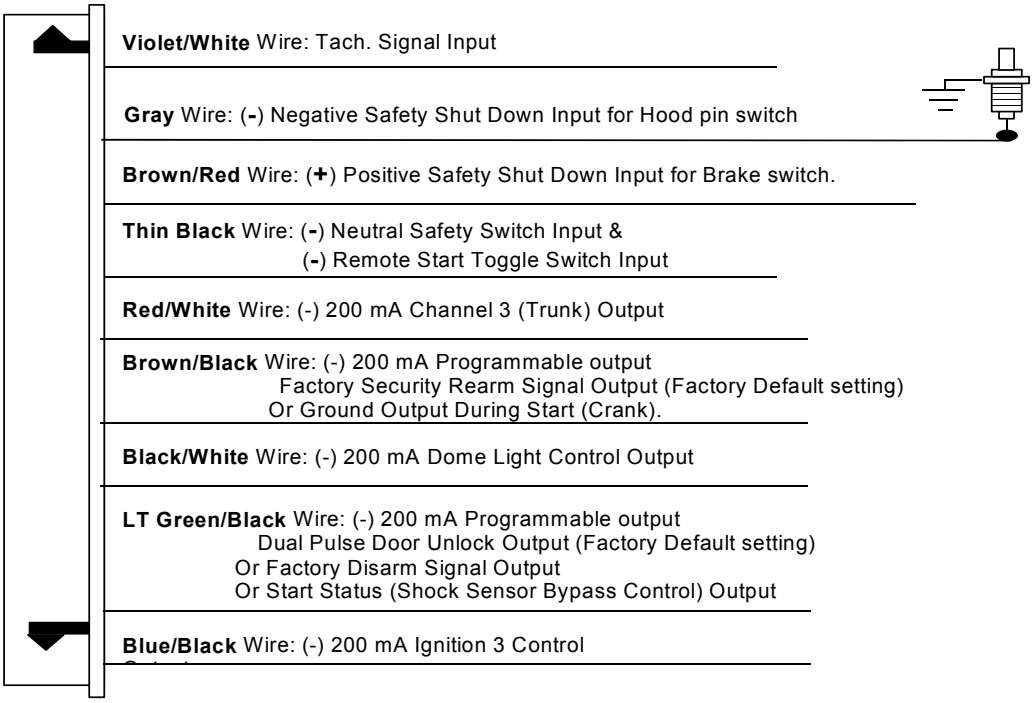
INSTALLER WARNINGS

This Remote Starter with Alarm System is designed to be installed on fuel injected vehicles ONLY.

- For automatic transmission vehicle, this system must be installed and wired through a safety switch it will not start in any forward or reverse gear.
- Some automatic transmission vehicle [mainly older GM vehicles with a purple starter wire] have a mechanical-type park safety switch instead of electrical safety switch. The mechanical type does not interrupt the starter circuit when the transmission is any gear and does not offer the 100% level of safety required for remote starting purposes. Therefore, our system should never be installed on any vehicle that uses a mechanical type park safety switch.
- For automatic transmission vehicle, once you install this system, you must verify that the vehicle will not start any forward or reverse gear. Regardless of the type of vehicle.
- Read operation manual for operating and programming routine.
- Do not install any component near the brake, gas pedal or steering linkage.
- Some vehicles have a factory installed transponder immobilizer system that can severely complicate the installation. There is possibility that this system can not be installed on some immobilizer equipped vehicles.
- Most vehicles have an SRS air bag system. Use extreme care and do not probe any wires of the SRS system.
- Disconnect the car battery before connecting work on the vehicle.
- Check behind panels before drilling any holes. Ensure that no wiring harness or other components are located behind the panels that would otherwise be damaged.
- Use conventional crimp lock, bullet on any wiring. Poor wiring, i.e. taped joints will possibly introduce unreliability into the alarm system and may result in false alarms or incorrect operation.
- Install wiring neatly under carpets or behind trim to prevent possible damage to wires.
- For the wire operates the current more than 10A. We suggest soldering all connection point. Do not use crimp lock type connectors or wire nuts.

INSTALLATION DIAGRAM

#H4. 9 PIN WIRE CONNECTION:



Violet/White Wire: Tach. Signal Input

Gray Wire: (**-**) Negative Safety Shut Down Input for Hood pin switch

Brown/Red Wire: (**+**) Positive Safety Shut Down Input for Brake switch.

Thin Black Wire: (**-**) Neutral Safety Switch Input &
(**-**) Remote Start Toggle Switch Input

Red/White Wire: (-) 200 mA Channel 3 (Trunk) Output

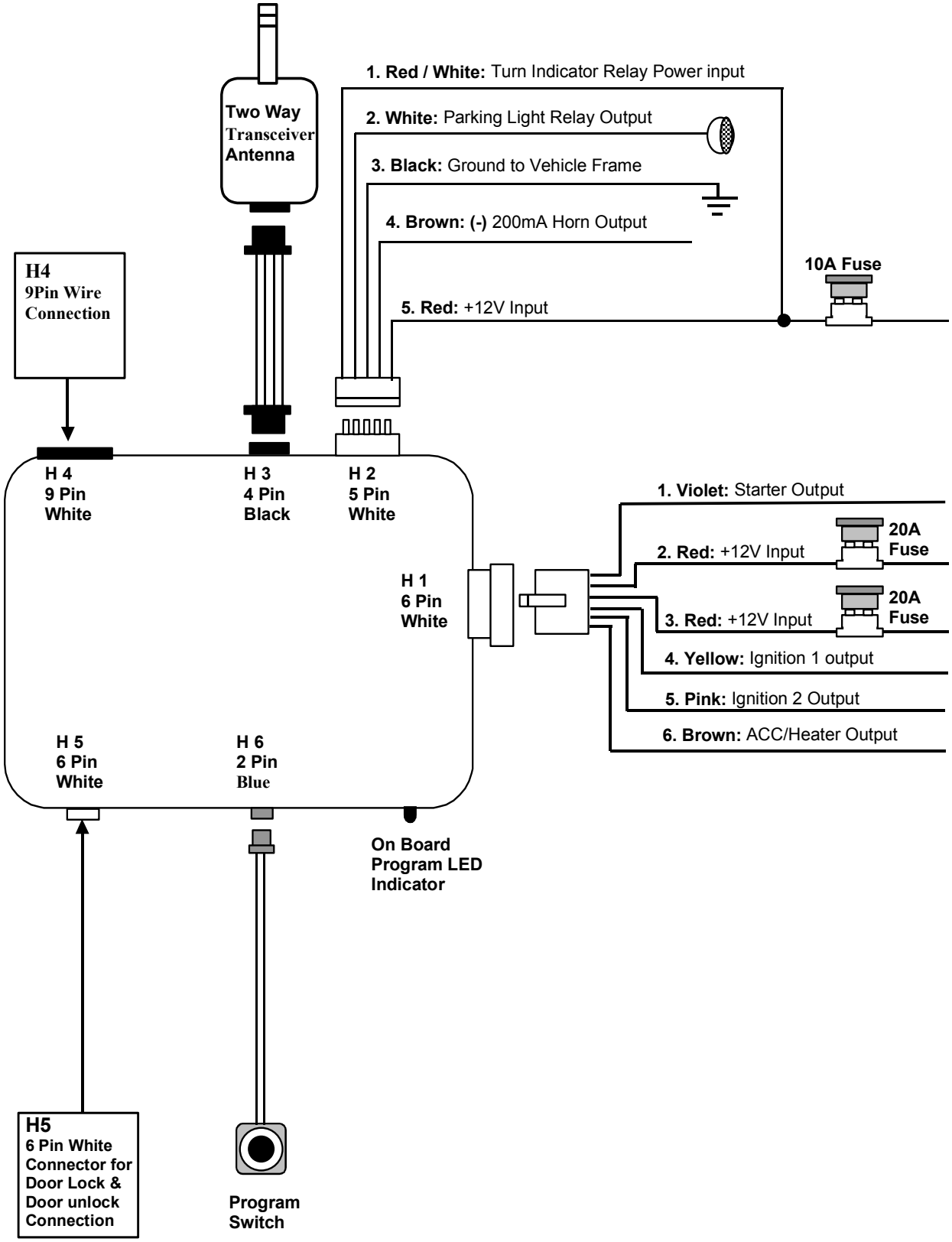
Brown/Black Wire: (-) 200 mA Programmable output
Factory Security Rearm Signal Output (Factory Default setting)
Or Ground Output During Start (Crank).

Black/White Wire: (-) 200 mA Dome Light Control Output

LT Green/Black Wire: (-) 200 mA Programmable output
Dual Pulse Door Unlock Output (Factory Default setting)
Or Factory Disarm Signal Output
Or Start Status (Shock Sensor Bypass Control) Output

Blue/Black Wire: (-) 200 mA Ignition 3 Control

IMPORTANT NOTE: Directly connect the Thin Black wire to the “GROUND” when this wire is not used.


Two Way
Transceiver
Antenna
1. Red / White: Turn Indicator Relay Power input
2. White: Parking Light Relay Output
3. Black: Ground to Vehicle Frame
4. Brown: (-) 200mA Horn Output
5. Red: +12V Input
10A Fuse
H4
9Pin Wire
Connection
H 4
9 Pin
White
H 3
4 Pin
Black
H 2
5 Pin
White
H 1
6 Pin
White
1. Violet: Starter Output
2. Red: +12V Input
20A
Fuse
3. Red: +12V Input
20A
Fuse
4. Yellow: Ignition 1 output
5. Pink: Ignition 2 Output
6. Brown: ACC/Heater Output
H 5
6 Pin
White
H 6
2 Pin
Blue
On Board
Program LED
Indicator
H5
6 Pin White
Connector for
Door Lock &
Door unlock
Connection
Program
Switch

WIRING

Keep wiring away from moving engine parts, exhaust pipes and high-tension cable. Tape wires that pass through holes on the firewall to prevent fraying. Watches out sharp edges that may damage wires and causes short circuit.

CAUTION: Do not connect the wire harness to the control module until all wiring to vehicle is complete.

6 PIN HEAVY GAUGE WIRING CONNECTIONS:

Remember that the system does to start a vehicle is duplicate the functions of the ignition key switch! Below, we will explain the three basic functions of the ignition switch. Since this installation will require analysis of the ignition switch functions, we recommend making the three connections below at the ignition switch harness directly.

Violet wire – Starter Output –

Careful consideration for the connection of this wire must be made to prevent the vehicle from starting while in gear. Understanding the difference between a mechanical and an electrical Neutral Start Switch will allow you to properly identify the circuit and select the correct installation method. In addition you will realize why the connection of the safety wire is required for all mechanical switch configurations.

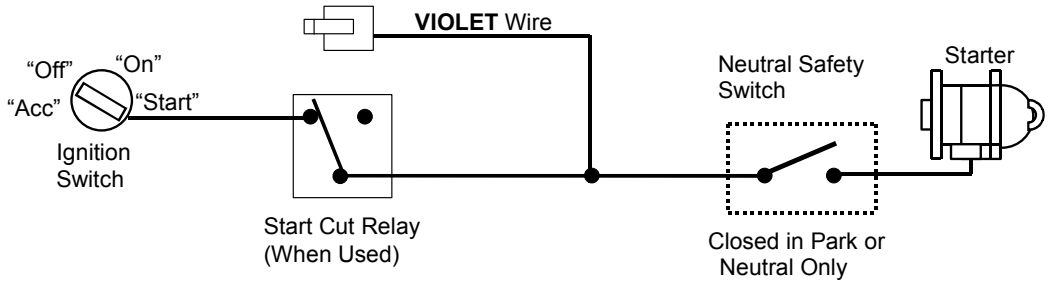
Failure to make this connection properly can result in personal injury and property damage.

In all installations it is the responsibility of the installing technician to test the remote start unit and assure that the vehicle can not start via RF control in any gear selection other than park or neutral.

In both mechanical and electrical neutral start switch configurations; the connection of the VIOLET wire will be made to the low current start solenoid wire of the ignition switch harness. This wire has +12 volts when the ignition switch is turned to the “START” (CRANK) position only. This wire have 0 volts in all other ignition switch positions.

NOTE: This wire must be connected to the vehicle side of the starter cut relay (when used). For the electrical neutral switch configuration, this connection must be made between the starter inhibit relay (when used) and the neutral safety switch as shown in the following diagram.

Failure to connect this wire to the ignition switch side of the neutral safety switch can result in personal injury and property damage. SEE NEUTRAL START SAFETY TEST FOR FURTHER DETAILS.



Red wires – +12V Power Input –

Remove the two 20A fuses prior to connecting these wires and do not replace them until the satellite has been plugged into the control module. These wires are the source of current for all the circuits the relay satellite will energize. They must be connected to a high current source. Since the factory supplies (+) 12V to the key switch that is used to operate the motor, it is recommended that these wires be connected there.

Note: If the factory supplies two separate (+) 12V feeds to the ignition switch, connect one RED wire of the satellite to each feed at the switch.

Yellow wire – Ignition Output –

Connect the YELLOW wire to the ignition wire from the ignition switch. The ignition wire should receive "12 volts" when the ignition key is in the "ON" or “RUN” and "START" or “CRANK” position. When the ignition is turned "OFF", the ignition wire should receive "0" voltage. **The YELLOW wire must be connected.**

Pink wire – Ignition 2 Output

Some vehicles have [2] ignition wires that must be power. Connect the PINK wire to the ignition 2 wire from the ignition switch. The ignition wire should receive "12 volts" when the ignition key is in the "ON" or “RUN” and "START" or “CRANK” position. When the ignition is turned "OFF", the ignition wire should receive "0" voltage. If the PINK wire is not used, cap the end of the wire.

Brown wire – Accessory Output (Heater /ACC Output) –

Connect the BROWN wire to the accessory wire in the vehicle that powers the climate control system.

An accessory wire will show + 12 volts when the ignition switch is turned to the “ACCESSORY” or “ON” and “RUN” positions, and will show 0 Volts when the key is turned to the “OFF” and “START” or “CRANK” position. There will often be more than one accessory wire in the ignition harness. The correct accessory

wire will power the vehicle's climate control system. Some vehicle may have separate wires for the blower motor and the air conditioning compressor. In such cases, it will be necessary to add a relay to power the second accessory wire.

5 PIN WIRE HARNESS:

Red / White wire – Parking Light Relay Power Input –

The RED/WHITE wire is the input to the flashing parking light relay. The connection of the RED/WHITE wire will determine the output polarity of the flashing parking light relay.

If the vehicle you are working on has +12volt switched parking light, you don't need connect this wire. This wire already connected to +12 volt.

If the vehicle's parking light are ground switched, cut the RED/WHITE wire, connect the RED/WHITE wire to chassis ground.

White wire – Parking Light Relay Output (10A power output) –

Connect the WHITE wire to the parking light wire coming from the headlight switch. Do not connect the WHITE wire to the dashboard lighting dimmer switch. (Damage to the dimmer will result). The limitation of the WHITE wire is 10 AMP max. Do not exceed this limit or damage to the alarm and parking relay will result.

Black wire – System Ground –

This is main ground connection of the alarm module. Make this connection to a solid section of the vehicle frame. Do not connect this wire to any existing ground wires supplied by the factory wire loom, make the connection to the vehicle's frame directly.

Brown wire – (-) 200mA Horn Output –

This wire is provided to use the existing vehicle's horn as the keyless entry system's optional's warning audible device. It's a transistorized low current output, and should only be connected to the low current ground output from the vehicle's horn switch.

Red wire – System Power (+12V Constant) –

The RED wire supplies power to the system. Connect this wire to a constant +12 volt source.

BLACK 4-PIN CONNECTOR. – TWO-WAY TRANSCEIVER/ANTENNA MODULE

The Two-way transceiver/antenna mounts on the location above the belt line (dashboard) of the vehicle for best reception. We suggest you mount it on the lower left or upper left-hand side of windshield.

Warning! Do not mount in such a manner that it obstructs the driver's view.

- Remove the protective tape backing.
- Carefully align the two-way transceiver/antenna and apply to windshield.
- Route the black connector wire behind the trim and connect to the two-way transceiver/antenna.
- Connect the other end to the control module.
- Special considerations must be made for windshield glass as some newer vehicles utilize a metallic shielded window glass that will inhibit or restrict RF reception. In these vehicles, route the two ways transceiver/antenna module away from metallic shielded window glass as far as possible.

9 PIN WIRE CONNECTORS:

Violet / White wire – Tach. Input Connection –

Note: You should connect this wire if you program the Feature **IV – 2** to "Engine Checking TACH." otherwise not to connect this wire and tap the end.

Note: No connection of this wire is required, if you use the voltage checking type mode.

This input provides the remote start system with information about the engine's revolutions per minute (RPM). It can be connected to the negative side of the coil in vehicle with conventional coils. In multi-coil and high energy ignition system locating a proper signal may be more difficult. Once connected,

To test for a tachometer wire, a multi-meter capable of test AC voltage must be used. The tach wire will show between 1V and 6V AC at idle, and will increase as engine RPM increases. In multi-coil ignition system, the system can learn individual coil wire. Individual coil wires in a multi-coil ignition system will register lower amounts of AC voltage. Also, if necessary, the system can use a fuel injector control wire for engine speed sensing. Common locations for a tach. wire are the ignition coils itself, the back of the gauges, engine computers, and automatic transmission computers.

IMPORTANT! Do not test tacho. wires with a test light or logic probe. The vehicle will be damaged.

How to find a tach. wire with your multi-meter

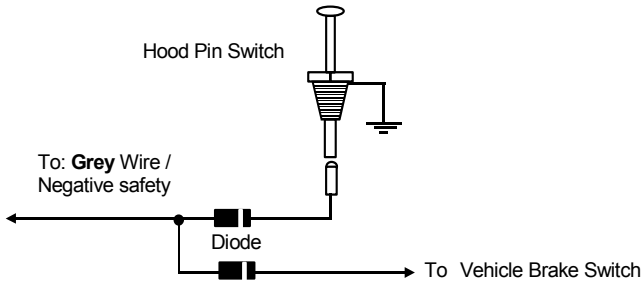
1. Set the ACV or AC voltage (12V or 20V is fine.)
2. Attach the (-) probe of the meter to chassis ground.
3. Start and run the vehicle.
4. Probe the wire you suspect of being the tach. wire with the red probe of the meter.
5. If this is the correct wire the meter will read between 1V and 6V.

IMPORTANT NOTE: You must program the "Tach Signal" before trying to remote start.

Grey wire – (-) Negative Safety Shut Down For Hood Pin Switch –

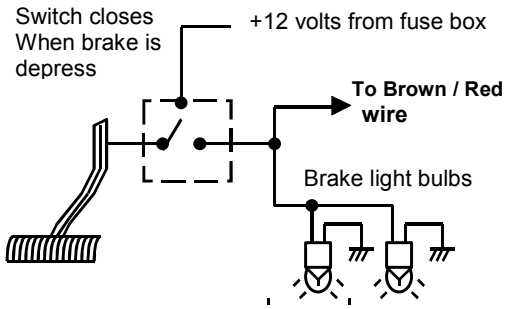
This wire provides an instant shutdown for the remote start, whenever it is grounded. Connect the wire to the hood pin switch previously installed. This wire must be routed though a grommet in the firewall and connected to the hood pin switch.

Important! This connection is a safety wire and must be connected as shown and tested as specifiled. Failure to do so may result in personal injury or property damage. See detail of wiring in the following diagram. This wire may also be used if the vehicle brake light circuit switches ground to the brake lights. An isolation diode must be used for ground switched brake light circuits and must be connected to the output of the brake switch.



Brown / Red wire – (+) Positive Safety Shut Down For Brake –

This wire provides an instant shutdown for the remote start, whenever it gets +12volts. If the brake lights switch in the vehicle switches +12 volts to the brake light circuit, connect this wire to the output side of the brake switch. This will allow the remote start to shut down if an attempt is made to operate the vehicle without the key while running under the control of the remote start. In most vehicles, in order to shift gear, the brake pedal must be depressed. The brake input will in turn cause the remote start unit to shut off. See below diagram.



Thin Black wire – (-) Neutral Safety Switch or (-) Remote Toggle Switch Input –

When the THIN BLACK wire is grounded, the remote start unit is operable. When this wire is open from ground, the remote start is disabling.

1. The optional "remote start toggle switch" can be added on to temporarily disable the Remote Start Device, it can prevent the vehicle from being remote started accidentally. This feature is useful if the vehicle is being serviced or stored in an enclosed area. To disable the remote start, move the optional remote start enable toggle switch to the OFF position. To enable the remote start, move the optional remote start enable toggle switch to the ON position.
2. If needed, This wire can connect to the PARK/NEUTRAL switch in the vehicle. (See the TESTING YOUR INSTALLATION GUIDE)

IMPORTANT NOTE: Directly connect the THIN BLACK wire to the "GROUND" when this wire is not used.

Red / White wire – (-) 200ma Channel 3 (Trunk) Output –

This will become a 1 second pulse ground by activate channel 3 on transmitter for two seconds, the current capacity of this wire is 200 mA. This feature allows you to remote control trunk release or other electric device.

Brown / Black wire – (-) 200mA Factory Security Rearm Signal / Key Sensor Output –

Factory Security Rearm Signal Output (Factory default setting.)

This output is programmable. If programmed rearm a factory installed security system. This wire will supply a pulse whenever the remote start times out or is shut dowm using the transmitter and remote door locking..

Ground Output During Start (Crank)

This wire will provide a 200mA ground output while the starter output of the remote start unit is active. This output can be used to activate the Crank Low/Bulb Test wire found in some GM vehicles. This wire is also referred to as the ECM wake up wire in some vehicles.

Black / White wire – (-) 200mA Dome Light Supervision Output –

This wire becomes grounded when the dome light controls circuit active. The current capacity of this wire is 200mA. This wire can control the operation of the interior lights. An optional 10 Amps relay can be used to this system for interior lights operation. Upon disarming, the interior lights will remain on for 30 seconds.

LT. Green / Black wire – (-) 200ma Programmable Output –

Dual Pulse Door Unlock Output – (Factory default setting)

The dual pulse door unlock feature will work for the most fully electronic door lock circuit. The vehicle must have an electronic door lock switch (not the lock knob or key switch), which locks and unlocks all of vehicle's doors. When wired for this feature, press the disarm (or unlock) button one time will disarm the alarm and unlock the driver's door only. If, press disarm (or unlock) button two times within 3 seconds, the alarm will disarm and all doors will unlock.

Factory Security Disarm Signal Output –

This wire is designed to disarm a factory installed security system. This wire sends a negative (-) 1 seconds pulse upon a remote start and remote door unlocking. Some factory systems must be disarmed to allow remote starting. In most cases, this wire may be connected directly to the factory alarm disarm wire. The correct wire will show nagative ground when the key is used to unlock the doors or trunk. This wire is usually found in the kick panel area in the wiring harness coming into the car body from the door.

Start Status (Shock Sensor By-Pass Control) Output–

This wire is designed to by-pass shock sensor module. This wire will supply an output at all times the remote start is operating plus an additional 3 seconds after the remote start unit turn off.

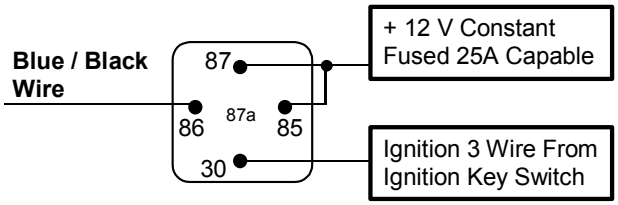
Blue / Black wire – (-) 200ma Ignition 3 Control Output –

This wire provides a 200mA (-) ground output that becomes active 4 seconds before the remote start unit initialize, and remains grounded while running.

Ignition 3 output:

Some newer vehicles use a third ignition wire which is required to start and keep the vehicle's engine running. If this is the case, wire an IGN 3 relay (not supplied) as shown below:

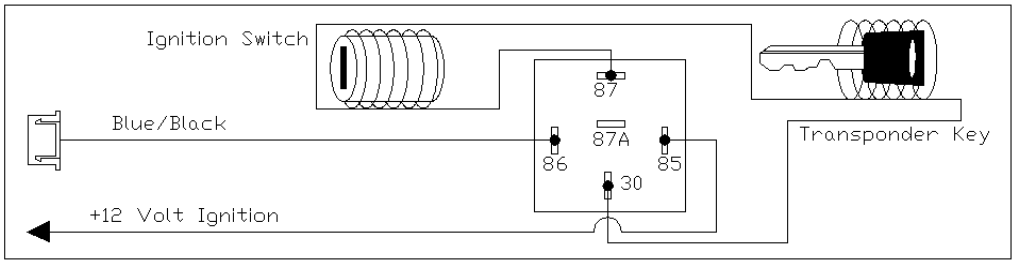
Do not connect any vehicle circuits together, they are isolated for a resaon.



Transponder interfacing using relay:

If the vehicle has transponder system installed, you will need to by-pass the system while the vehicle is operating under the control of the Remote Start Unit. To do this:

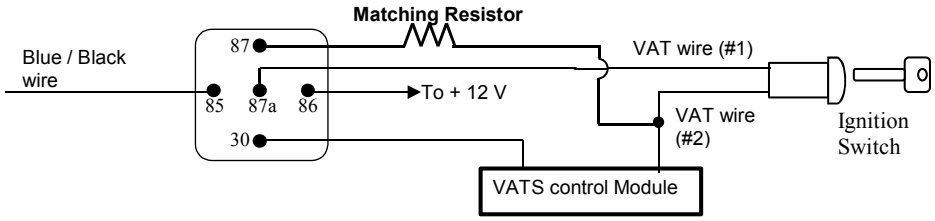
1.You will need a transponder key that's already programmed to the vehicle.
2.Remove the trim around the ignition switch.
3.Wrap a thin (28 - 30awg) wire tightly around ignition switch 6 to 8 times and secure it.
4.About 6"down line make another loop of approximately 2"diameter.
5.Place the key inside this loop and secure it to the loop.
6. Connect on end of the (28 - 30awg) wire to pin (87) of the relay module.
7. Connect the other end of the loop wire to Pin (30) of relay module.
8. Connect the pin (86) of the relay module to the ignition wire from the ignition switch.
9. connect the pin (85) of the relay module to the BLUE/BLACK wire of 5-pin mini white connector.



GM VATS KEY OVERRIDE:

If the vehicle has the General Motor VATS system installed, you will need to by-pass the system while the vehicle is operating under the control of the Remote Start Unit. To do this:

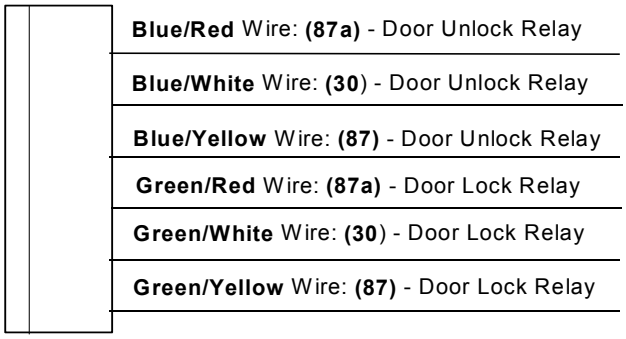
1. Measure the resistance of the resistor pellet on the ignition key then select a resistor within 5% of the key's value.
2. Locate the pair of VATS wires in the vehicle, usually a pair of thin gauge wires running from the ignition switch to the VATS control module.
3. Connect the BLUE/BLACK wire from Remote Start Unit to TERMINAL #85 of an external relay. Connect terminal #86 of the relay to a fused +12 volt.
4. Cut (#1) wire (as shown), and connect the ignition switch side of the cut wire to terminal #87a of the relay. Connect the other side of the (#1) wire to terminal #30.
5. Connect the previously selseced resistor from terminal #87 to the second(#2) wire (as shown).



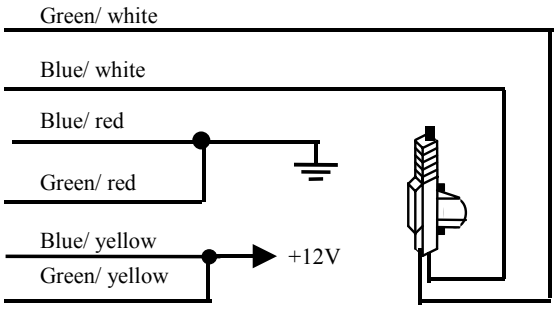
2 PIN BLUE CONNECTOR FOR THE PROGRAM SWITCH:

Select a mounting location for the switch that is easily accessible to the driver of the vehicle. The switch does not have to be concealed. however, concealing the switch is always recommended. Route the program switch wires to the control module.

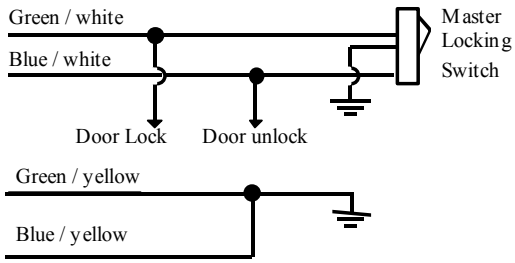
6 PIN DOOR LOCK CONNECTOR:



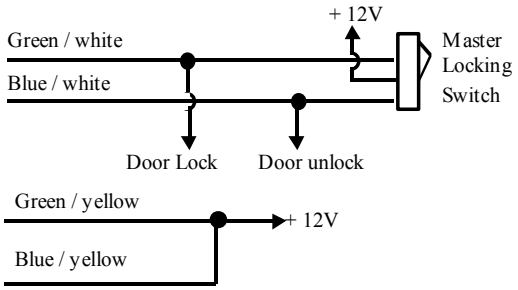
INSTALL NEW DOOR LOCK MOTORS



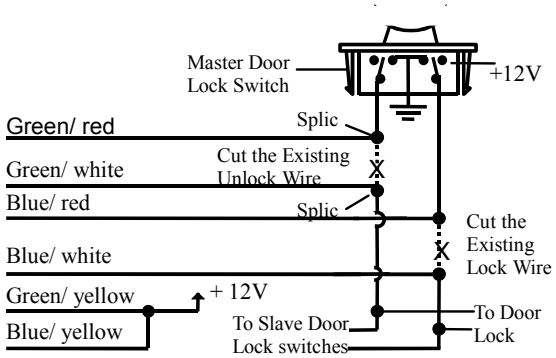
NEGATIVE TRIGGER DOOR LOCK SYSTEM



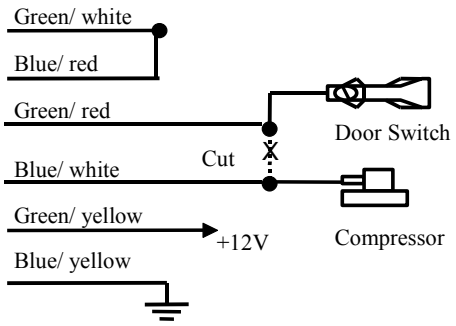
POSITIVE TRIGGER DOOR LOCK SYSTEM



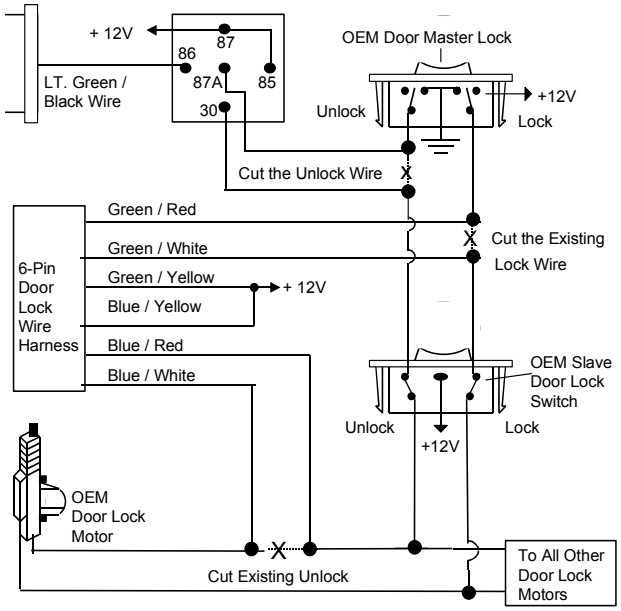
ALTERNATING DOOR LOCKS



VACUUM OPREATE DOOR LOCKING SYSTEM



2 STEP DOOR UNLOCK WIRE CONNECTION FOR 5 WIRE ALTERNATING DOOR LOCKS

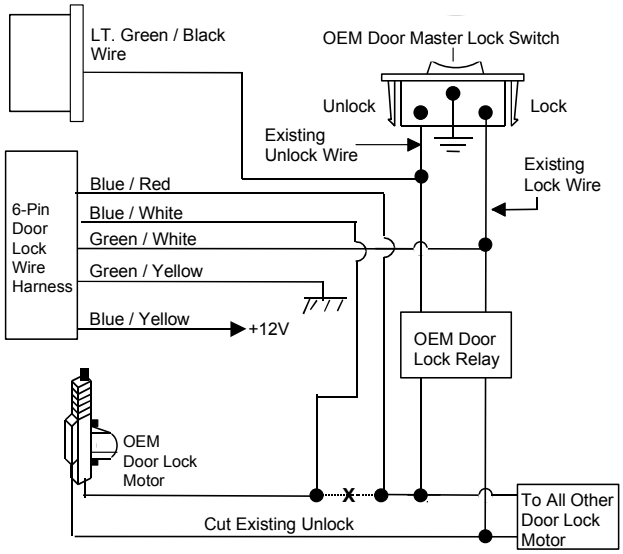


VACUUM OPERATED DOOR LOCKING SYSTEM:

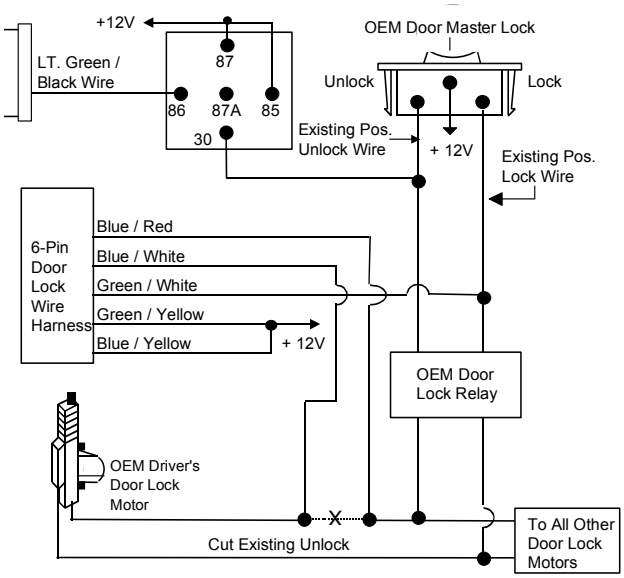
TYPICAL OF MERCEDES BENZ AND AUDI.

Locate the wire under the driver's kick panel. Use the voltmeter connecting to ground, verify that you have th correct wire with the doors unlocked, the voltmeter will receive "12 volts". Lock the doors and the voltmeter wi read "0 volt". Move the alligator clip to +12V and the voltmeter will receive "12 volts". Cut this wire and make connections. Be sure to program door lock timer to 3.5 seconds. (See Feuture **I – 2** Programming.)

2 STEP DOOR UNLOCK WIRE CONNECTION FOR GROUND SWITCHED DOOR LOCKS



2 STEP DOOR UNLOCK WIRE CONNECTION FOR POSITIVE SWITCHED DOOR LOCKS



A. PROGRAMMING TRANSMITTER:

Note: This mode will only retain the last 4 remote transmitters programmed. If the transmitter memory is exceeded, the security system will start deleting transmitters from memory in chronological order.

1. Turn the Ignition 'switch 'OFF/ON' 3 TIMES and stay in ON position. Within 15 seconds.
2. Push the Program switch **3** times and holding in on **3rd** push until a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the Transmitter programming mode.
3. Press and hold any button of the transmitter until the horn responds with a confirming chirp / a flash from parking light / the LED turns on for 2 seconds indicating the signal has been stored into memory.
4. If you have additional transmitters (up to 4) that need to be programmed, repeat step 3 for each transmitter.

Exit: Turn Ignition to 'OFF' position, or leave it for 15 seconds. A 3 long chirps & 3 parking light flashes to confirm exit.

B. FEATURES PROGRAMMING:

FEATURE "I" PRORAMMING:

1. Turn the Ignition 'switch 'ON/OFF' 3 TIMES and stay in OFF position.
2. Push the Program switch **2** times and holding in on **2nd** push until **one** chirp with a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the feature **'I'** programming mode.
3. Press and release the transmitter button 'A' corresponding to the feature 'A' you want to program.
   a. The horn chirps and LED pause will indicate previously setting.
   b. The factory default settings is always [1] LED flash, [1] chirp.

4 Depress the transmitter button 'A' again to change the feature. Simple keep re-depressing the transmitter button 'A' again until the module advances to your desired setting.
   a. In this case, Press button 'A' again, the module would advance to [2] LED flash, [2] chirps.
   b. Press button 'A' again, the module would advance to [3] LED flash, [3] chirps etc.

5. Depress the transmitter button 'B' corresponding to the feature 'B' you wants to program.

Press Transmitter Button	One Chirp / LED one pulse **Factory Default Setting**	Two Chirps / LED two pulses	Three Chirps / LED three pulses	Four Chirps / LED four pulses
1	Chirps on	Chirps off		
2	0.8-second Door lock pulses.	3.5-second Door lock pulse.	Double pulse unlock	Door lock with "Comfort Feature"
3	Ignition controlled door locks & unlocks	Ignition controlled door locks only	Ignition controlled door unlocks only	Without ignition controlled door locks & unlocks
4	Without this feature	Door lock before start	Door lock after shut-down	Door lock before start and Door lock after shut-down

Exit: Turn Ignition to 'ON' position, or leave it for 15 seconds. A 3 long chirps & 3 parking light flashes to confirm exit.

FEATURE "II" PRORAMMING:

1 Turn the Ignition switch 'ON/OFF' 3 TIMES and stay in OFF position.

2 Push the Program switch **4** times and holding in on the **4th** push until **two** chirps with a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the feature **'II'** programming mode.

3 Press and release the transmitter button 'A' corresponding to the feature 'A' you want to program.

Press Transmitter Button	One Chirp / LED one pulse **Factory Default Setting**	Two Chirps / LED two pulses	Three Chirps / LED three pulses
1	Pathway illumination feature "off"	Parking light turns "on" for 30- second upon an unlock signal	Parking light turns "on" for 30- second upon an unlock signal & 10-second upon a lock signal.
2	Constant parking light output	Flashing parking light output	
3	Brown/Black Wire = Factory Security Rearm Signal Output	Brown/ Black Wire = Ground Output During Start (Crank)	
4	LT. Green / Black Wire = Dual Pulse door unlock output	LT. Green / Black Wire = Factory Security Disarm Signal Output	LT. Green / Black Wire = Start Status Output (Shock Sensor Bypass)

Exit: Turn Ignition to 'ON' position, or leave it for 15 seconds. A 3 long chirps & 3 parking light flashes to confirm exit.

FEATURE "III" PRORAMMING:

1. Turn the Ignition 'switch 'ON/OFF' 3 TIMES and stay in OFF position.
2. Push the Program switch **6** times and holding in on the **6th** push until **three** chirps with a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the feature **'III'** programming mode.
3. Press and release the transmitter button 'A' corresponding to the feature 'A' you want to program.

Press Transmitter Button	One Chirp / LED one pulse **Factory Default Setting**	Two Chirps / LED two pulse	Three Chirps / LED three pulse	Four Chirps / LED four pulse
1	Gasoline Engine	Diesel Engine and 10 seconds warn-up timer	Diesel Engine and 15 seconds warn-up timer	Diesel Engine and 20 seconds warn-up timer
2	20 minutes run time	30 minutes run time	5 minutes run time	10 minutes run time
3	Factory alarm disarm with channel 3 on	Without this feature		
4	3 Hour Time start	2 Hour Time Start		

Exit: Turn Ignition to 'ON' position, or leave it for 15 seconds. A 3 long chirps & 3 parking light flashes to confirm exit.

FEATURE "IV" PRORAMMING:

1. Turn the Ignition 'switch 'ON/OFF' 3 TIMES and stay in OFF position.
2. Push the Program switch **8** times and holding in on the **8th** push until **four** chirps with a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the Start feature **'IV'** programming mode.
3. Press and release the transmitter button 'A' corresponding to the feature 'A' you want to program.

Press Transmitter Button	One Chirp / LED one pulse **Factory Default Setting**	Two Chirps / LED two pulse	Three Chirps / LED three pulse	Four Chirps / LED four pulse
1	Exit the programming mode. (3 long chirp & 3 parking light flashes to confirm this exit.)			
2 +	Engine Checking Voltage.	Engine Checking TACH. / RPM Learning Mode		
3	Start Timer: 0.6-second	0.8-second (2 chirps), 1.0-second (3 chirps), 1.2-second (4 chirps), 1.4-second (5 chirps), 1.6-second (6 chirps), 1.8-second (7 chirps), 2.0-second (8 chirps), 3.0-second (9 chirps), 4.0-second (10 chirps),		
4	Low check level for "Engine checking Tach." Hi check level for "Engine checking Voltage."	Hi check level for "Engine checking Tach." Low check level for "Engine checking Voltage."		

Exit: Press the button on the transmitter. A 3 long chirps & 3 parking light flashes to confirm exit.

ENGINE CHECKING TACH. / RPM LEARNING

IMPORTANT NOTE: You must program the "Tach Signal" before trying to remote start.

1. Turn the Ignition switch 'ON/OFF' 3 TIMES and stay in OFF position.
2. Push the Program switch **8** times and holding in on the **8th** push until four chirps with a long chirp is hearing and the LED start to flash then release the Program switch.
3. Press and release the transmitter and buttons at the same time twice [2] LED flash, [2] chirp to confirm the system in features "RPM Learning mode".
4. Within 10 seconds, start the vehicle with the key. (While the engine is running, the parking & LED will flash, If don't, please check VIOLET/WHITE wire connection.
5. Press and hold the Program switch for 2 seconds until a long chirp and the LED / the parking light will constantly on for two seconds. The RPM signal is learned.
6. Turns off the ignition switch to stop engine running.

Once you complete step 6, you can adjust and test "Check Level" as below:

CHECK LEVEL PROGRAMMING: (TEST and ADJUST)

1. Press the button twice on the transmitter to start the vehicle.
2. If everything goes well:

a. Press the ✱ button twice on the transmitter to stop engine running. You have been completed this programming successfully.

b. Press 🔒 button on the transmitter to exit the program mode. There will be 3 long chirps & 3 parking light flashes for confirmation.

3. If the crank time is too short, (Engine not running, while stops cranks):
   a. Press the ✱ button on the transmitter to stop engine running.
      Press 🚗 button on the transmitter to set proper "Check Level " to Hi position. [2] LED flashes, [2] chirps to confirm this setting
   b. Repeat the step1 – 4.
4. If the crank time is too long, (Engine already successfully running, while still cranks):
   a. Press the ✱ button on the transmitter to stop engine running.
      Press 🚗 button on the transmitter to set proper " Check Level " to Low position. [1] LED flash, [1] chirp to confirm this setting
   b. Repeat the step1 – 4.
   c.

ENGINE CHECKING VOLTAGE

Important Note: The "Check Level" for most vehicles would be set in "Hi Check Level**",** while in "Engine Check Voltage mode", the "Check Level" must be set at "HI" position first.

1. Turn the Ignition 'switch 'ON/OFF' 3 TIMES and stay in OFF position.
2. Push the Program switch **8** times and holding in on the **8th** push until four chirps with a long chirp is hearing and the LED start to flash then release the Program switch.
3. Press the transmitter 🔒 and 🔓 buttons at the same time to set the "Engine Checking Voltage". [1] LED flashes, [1] chirps to confirm this setting
   Once you complete step 3, you can adjust and test "Start Timer" as below:

START TIMER PROGRAMMING: (TEST and ADJUST)

1. Press the ✱ button twice on the transmitter to start the vehicle.
2. If everything goes well: Wait for 15 seconds:
   a. If the engine still running.
      I. Press the ✱ button twice on the transmitter to stop engine running. You have been completed this programming successfully.
      II. Press 🔒 button on the transmitter to exit the program mode. There will be 3 long chirps & 3 parking light flashes for confirmation.
   b. If the engine shut down after the vehicle has been started.
      I. Press the ✱ button twice on the transmitter to stop engine running.
      II. Press 🚗 button on the transmitter to set "**Check Level**" to LOW position. [1] LED flash, [1] chirp to confirm this setting
      III. Repeat the step1 – 2.
3. If the crank time is too long, (Engine already successfully running, while still cranks):
   a. Press the ✱ button twice on the transmitter to stop engine running.
   b. Press 🔓 button on the transmitter to set proper "Start Timer". The chirp & LED pause will confirm this enters. (Decrease "Start Timer" is necessary.)
   c. Repeat the step1 – 4.
4. If the crank time is too short, (Engine not running, while stops cranks):
   a. Press the ✱ button twice on the transmitter to stop engine running.
   b. Press 🔓 button on the transmitter to set proper "Start Timer". The chirp & LED pause will confirm this enters. (Increase "Start Timer " is necessary.)
   c. Repeat the step1 – 4.
   d.

RETURN TO FACTORY DEFAULT SETTING

1. Turn the ignition ON then OFF 3 TIMES and stay in OFF position.
2. Push the Program switch **12** times and holding in on the **12th** push until **six** chirp with a long chirp is hearing and the LED start to flash then release the Program switch. You are now in the "Return To Factory Default Setting" programming mode.
3. Press and hold the 🔒 and 🚗 buttons at the same time on the transmitter for 5 seconds, there will be a confirmation six chirp with 3 long chirp and the LED turns On for 2 seconds to confirm the system Feature Programming all returns to factory default setting.

SHUTDOWN DIAGNOSTICS

The unit has the ability to report the cause of the last shutdown of the remote start system.

1. Turn the Ignition switch to 'ON position.
2. Press the button on the transmitter.
3. The LED will now report the last system shutdown by flashing for one minute in the following grouped patterns:

LED Flashes	Shutdown Mode	
1	(-) Safety Shutdown input (Hood)	1. Close the hood. 2. Check GREY wire connection.
2	(+) Safety Shutdown input (Brake) or	1. Check BROWN/RED wire connection
	Neutral Safety Switch input fail	3. Move the Enable Toggle Switch to "ON" position. (If installed.) 4. Move the gear selector to "Park"/ "NEUTRAL" position. 5. Check THIN BLACK wire connection.
3	No RPM (Engine Checking TACH.) or	Check VIOLET/WHITE wire connection
	Hi Voltage. (Engine Checking Voltage.)	Program the "CHECK LEVEL" from "Hi Check Level" to "Low Check Level"
5	Over-rev	
6	System timed out	
7	Transmitter	
8	Tach. Signal has not been learned	Re-learning the RPM (Feature **IV – 2**)

TESTING YOUR INSTALLATION

Caution!! The follow procedure must be performed after the installation of the Remote Start Device. It is the responsibility of the installing technician to complete these tests. Failure to test the unit in the following manner may result in personal injury, property damage, or both.

1. Test the BRAKE shutdown circuit: With the vehicle in park (P), start the vehicle using the remote transmitter, Once the engine is running, press the brake pedal. The vehicle should shut down immediately. If the vehicle continues to run, check the brake circuit BROWN/RED wire connection.
2. Test the HOOD PIN shutdown circuit: Start the vehicle using the remote transmitter, Once the engine is running, pull the hood release and raise the hood. The vehicle should shut down immediately. If the vehicle continues to run, check the hood pin GREY wire connection.

3. NEUTRAL START SAFETY TEST:

1. Set the vehicle parking brake.
2. Block the drive wheels to prevent vehicle movement.
3. Sitting in the vehicle, turn the ignition switch to "ON" or "RUN" position. But do not start the engine.
4. Step on the brake pedal and shift the gear selector into "DRIVE" (D).
5. Put your foot over the brake pedal but do not press down on it. Be ready to step on the brake to shut down the Remote Start Device.
6. Start the vehicle using remote transmitter.
   a. If the starter does not engage, the test is complete.
   b. If the starter engages, immediately step on the brake pedal to shut down the system, recheck your VIOLET wire (starter output wire) connection. The heavy gauge VIOLET wire must be connected to the ignition switch side of the Neutral Start Switch. If the vehicle you are working on does not have an Electrical Neutral Safety Switch, it will be necessary to reconfigure the Remote Starts Wiring to accommodate this vehicle. The information concerning the Mechanical Neutral Safety Switch provided below will help you to determine if the vehicle you are working on has this type of safety switch and will provide alternate wiring methods to accommodate this situation.

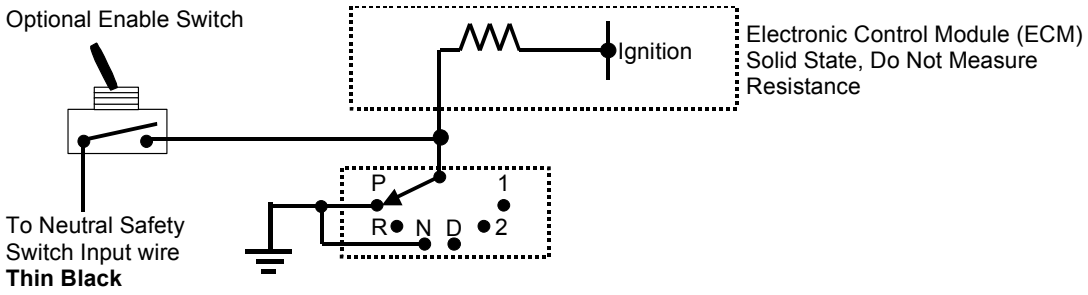
MECHANICAL NEUTRAL SAFETY SWITCH CONSIDERATIONS:

Mechanical neutral safety switch configurations differ slightly in that they do not offer the same level of safety when installing a remote start device. Often when the ignition switch is turned off while the gear selector is in any position other than park or neutral, the mechanical function will not allow the key to be turned to the start position or be removed from the ignition cylinder. This configuration prevents mechanical operation while the vehicle is in gear but offers no consideration for electrical operation. Because of this potential problem, this installation requires the additional connection of a safety wire from the remote start device to the vehicle PARK/NEUTRAL ECM input or the vehicle key in sensor. This connection will prevent remote start operation if the key is left in the ignition switch regardless of the gear selector position.

PARK/NEUTRAL ECM INPUT:
The Park/Neutral ECM input is the preferred method of installation. This not only maintains the integrity of the factory circuit, it is also the easiest to install, providing the vehicle you are working on has this ECM input. The installation required for this application (shown below), indicates in the slight reconfiguration of the control switch wiring. Shown is a typical GM Park/Neutral ECM input circuit. To connect the Remote Start unit to the GM Park/Neutral ECM input:

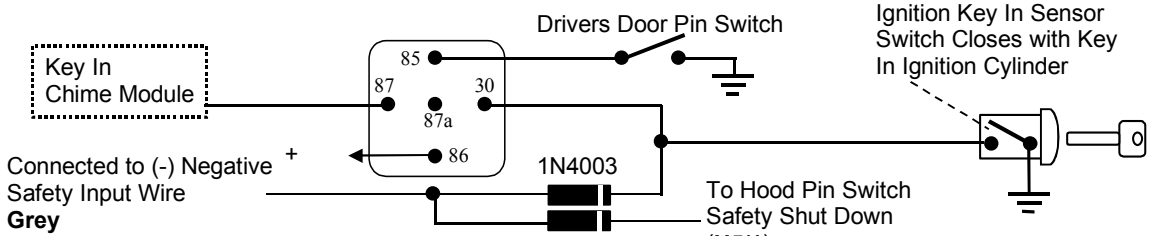
1. Locate the Orange/Black reference wire in the "C2" connector found at the ECM in GM B Body vehicles or, locate the equivalent reference wire in the vehicle you are installing the Remote Start Unit in.
2. Connect the THIN BLACK Neutral Safety Switch wire to this reference wire.

NOTE: If the optional remote starts enable toggle switch is installed, connect the one side the enable switch to this reference wire and connect the other side of the enable switch to the THIN BLACK Neutral Safety Switch wire of the Remote Start unit.
The reference diagram below shows a typical GM B Body ECM reference wire and how it is to be connected to the Remote Start Unit.



KEY IN SENSOR CIRCUITS:
If the vehicle you are working on does not have or you cannot locate the ECM reference wire, there are two alternatives available. Although not preferred, the vehicle Key In Sensor may be reconfigured to allow a margin of safety and will prevent the vehicle with a Mechanical Neutral Start Switch from starting in gear. WE ADVISES THAT YOU MAINTAIN THE FACTORY CIRCUIT WHENEVER POSSIBLE. The following two circuits may be used only if the above circuit is not available.
NOTE: When completing an installation using either of the following key in sensor circuits, if the operator inserts the ignition key while the vehicle is running under the control of the Remote Start, the vehicle will shut down. This must be explained to the operator as it is in contrast to the normal operation of a vehicle utilizing an electrical neutral start switch and is inconsistent with the operators manual.
Additional information concerning Key in Sensor methods 1&2 are listed below and should be reviewed before considering either alternative.
Method 1 will allow the safety required for the remote start unit and prevent the vehicle from starting while in any gear other than Park or Neutral while the key is in the ignition cylinder however, if the key is left in the ignition switch and the door is left opened, the added relay will be energized causing a 150mA drain on the battery.
Method 2 will allow the safety required for the remote start unit and prevent the vehicle from starting while in any gear other than Park or Neutral while the key is in the ignition cylinder however, the original factory key in chime module will not alert the owner that the key has been left in the ignition switch. In addition, this may also effect other warning tones such as the light on reminder.
These situations should be carefully considered before altering the vehicle's wiring and must be fully explained to the consumer.

METHOD 1



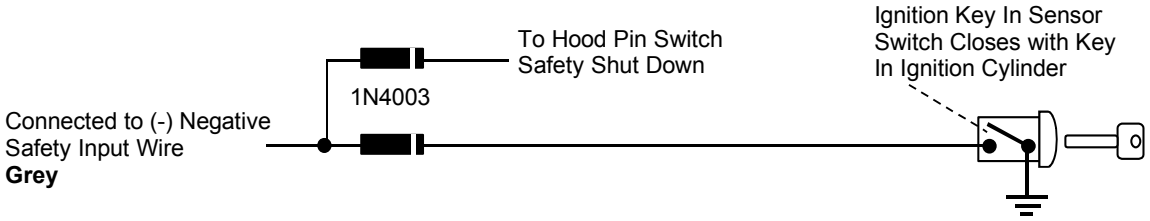
To connect to the key in sensor as shown in method 1:

A. Locate the control wire that connects the drivers door pin switch to the key in sensor switch.
B. Cut this wire and connect the ignition cylinder side to chassis ground.
C. Locate the key in sensor switch wire that connects the chime module to the ignition cylinder.

D. Cut this wire and connect the ignition cylinder side to terminal 30 of a P&B VF45F11 or equivalent relay.
E. Connect the cathode (striped) side of a 4003 series diode to this same wire, and connect the (non striped) side to the negative safely input wire (GREY) of the Remote Start Unit.
F. Connect terminal 86 of the relay to a fused + 12 volt constant battery source.
G. Connect terminal 87 of the relay to the Chime Module side of the previously cut wire in step D.
H. Connect terminal 85 of the relay to the Drivers Door side of the pin switch wire previously cut in step B.

Note: A second 4003 series diode may be required to maintain the integrity of the hood open, shut down circuit. If this is the case, it must be installed as shown in the diagram above. The anode (Non Stripped) side must be connected to the GREY wire of the Remote Start Unit. The cathode (Striped) side must be connected to the hood pin switch. If the hood pin switch is also used for an alarm trigger input, be certain to use the dual diode assembly packaged with the Remote Start Unit as shown in this installation guide.

METHOD 2



To connect to the key in sensor circuit as shown for method 2:

A. Locate the control wire that connects the drivers door pin switch to the key in sensor switch.
B. Cut this wire and connect the ignition cylinder side to chassis ground.
C. Locate the key in sensor switch wire that connects the chime module to the ignition cylinder.
D. Cut this wire and connect the ignition cylinder side to the Remote Start Negative Safety Shut down wire GREY, using a 4003 series diode as shown above.

Note: A second 4003 series diode may be required to maintain the integrity of the hood open, shut down circuit. If this is the case, it must be installed as shown in the diagram above. The anode (Non Striped) side must be connected to the GREY wire of the Remote Start Unit. The cathode (Striped) side must be connected to the hood pin switch. If the hood pin switch is also used for an alarm trigger input, be certain to use the dual diode assembly packaged with the Remote Start Unit as shown in this installation guide.
AFTER THE CONNECTION OF THE NEUTRAL START SAFETY WIRE AS INDICATED IN ANY OF THE PREVIUOS ALTERNATE CONFIGURATINS, THIS CIRCUIT MUST BE TESTED FOR OPERATION. Retest by following the steps outlined in the NEUTRAL START SAFETY TEST shown in this manual.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions.

1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.

Per FCC 15.21, you are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

“Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.”

This Class B digital apparatus complies with Canada RSS-210.
Cet appareil numérique de la classe B est conforme à la norme CNR-210 du Canada

The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment. (DoC)
The term “IC:” before the certification/registration number only signifies that the Industry Canada technical specifications were met.

DELUXE 200
REMOTE ENGINE STARTER
WITH ALARM SYSTEM
OWNER'S MANUAL

WARNINGS:

As with any product that performs automatic functions, there are certain safety precautions that you must practice and be aware of.

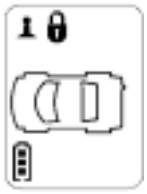
1. Keep the transmitter out of children's reach.
2. Do not leave anyone in the vehicle while running on remote control.
3. Alert servicing personnel that the vehicle can be started automatically.
4. Do not start the vehicle by remote while it's in an enclosed area or garage.
5. Always apply the parking brake and lock the vehicle as you exit the vehicle.
6. The vehicle windows must be rolled up.
7. Should the unit malfunction, disconnect the fuse until the problem is corrected.
8. The use and operations of this system is the sole responsibility of the operator.
9. Some areas may have local ordinances that prohibit leaving a vehicle running on public streets.
10. Do not start the vehicle by remote while the standard transmission vehicle is parked at a steep place.

OPERATION

REMOTE TRANSMITTER OPERATION:

Transmitter Button	System Function	Remark
🔒	Lock Doors	
🔒	Car Locator	Upon armed
🔒 (3-second)	Panic	Press and Hold for 3 seconds
🔒 + 🔓	Silent Locking / Unlocking Doors	Ignition in "off" position.
🔓	Unlock Doors	
🔓 - 🔓	Two Steps Door Unlock	Press twice within 3 seconds.
🚗 (2-second)	Trunk Release (Channel 3)	Press and Hold for 2 seconds
✱ - ✱	Activate or Turn Off The Remote Start	Press twice within 3 seconds.
🚗 - 🔓	Melody / Vibration Mode	Press within 5 seconds
🚗	LCD screen lamp turns on for 5 seconds.	

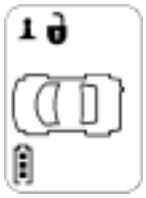
LOCK DOORS:



1. Press 🔒 button on the transmitter.
2. The horn will chirp once and parking light will flash once indicating that the vehicle's door is locking.

SILENT LOCKING / UNLOCKING DOORS: Press the transmitter 🔒 and 🔓 buttons at the same time will Lock or Unlock the vehicle's doors, No chirp sound will be heard, Lock or Unlock confirmation will be through the vehicles parking lights only.

UNLOCK DOORS:



1. Press 🔓 button on the transmitter.
2. The horn will chirp twice and parking light flash twice to indicating that the vehicle's door is unlocking and the dome light will turns on for 30 seconds.

PATHWAY ILLUMINATION: This feature turns the parking light "ON" for 30 seconds upon a unlock signal and for 10 seconds upon the lock signal.

TWO STEPS DOOR UNLOCK: This feature will independently unlock the driver's door only. Pushing the 🔓 button a second time within 3 seconds will unlock the other doors.

CAR LOCATOR

Press the 🔒 button twice to active car locator function. The horn will chirp 6 times. The parking light will flash 12 times, for you to easily locate your car.

PANIC FUNCTION:

The transmitter can be used as a remote panic switch to manually trigger the alarm in case emergency.

1. Press and hold the button for 3 second. The horn (if installed) will immediately sound.
2. During panic mode, the normal function of this transmitter button will be suspended.
3. To stop the alarm, press and hold button on the transmitter again for 3 seconds.
4. If the button is not pressed, the alarm will automatically stop after 30 seconds.

DOME LIGHT CONVENIENCE DELAY & SUPERVISION

Upon disarming, the interior light will remain on for 30 seconds.
Note: Turn on the ignition switch or lock the vehicle's door will turn off the dome light.

IGNITION CONTROL DOOR LOCK/UNLOCK..

If the vehicles door locks have been interfaced to the system, the system will automatically lock the vehicle's doors when the ignition is turned "ON" and /or unlock the vehicle's doors when the ignition is turned "OFF".

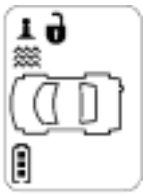
TRUNK RELEASE (CHANNEL 3) OUTPUT.

Press and hold button on the transmitter for two seconds to remote control the trunk release or other electric devices.

VIBRATION / MELODY MODE:

It is useful when you are in a noisy place and difficult to hear beep sound from the remote control as the remote control in this mode, vibrates it if your security system is triggered.

1. Press button first, within 5 seconds, press the button to select the mode of vibration or melody, the icon will displayed on the LCD screen to show the LCD remote transceiver is on vibration mode.
2. To exit programming mode, take no action for five seconds. The remote control will generate two long beeps to indicate programming mode has been exited.



SCREEN LAMP ON:

Press the button once; the LCD screen lamp will turns on for 5 seconds

REMOTE START OPERATION

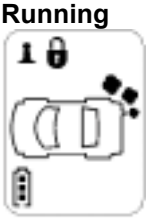
TO REMOTE START THE VEHICLE:

When you want to start your vehicle,

1. Press ✱ button twice on the transmitter
2. The parking light will activate to indicate the remote start received the signal. (A melody sounding from your Remote LCD transceiver and " " icon will flashes on the LCD screen to confirm the remote start was activated.)
3. The engine will start approximately 5 seconds.
4. Once the engine is running, after couple seconds the parking light will turn on again and climate controls will activate and adjust the vehicles interior temperature to your preset setting. (While the vehicle is running, the " " icon and the "minutes" digit on the LCD screen will flash and it will indicate count down timer based on the 5, 10, 20 or 30 minute run time set up by your installation center.)
5. The vehicle will run for 5 to 30 minute cycle and automatically shut down. (When the unit shuts off the count down timer will turn off and the transmitter will play a melody.)

Activate Remote Start

Engine Running



Note: The Remote Start Unit will not start the vehicle if any one of the following conditions exists:

1. The hood is opened.
2. The brake pedal is pressed.
3. Move the optional remote start enable toggle switch to OFF position. (If installed)
4. The gear selector is in any gear other then "PARK" or "NEUTRAL"
5. Pull down the hand brake. (for Standard Transmission Gear Vehicle)

TO OPERATE THE VEHICLE WHILE RUNNING ON THE REMOTE START:

To operate the vehicle while engine running on the remote start.

1. Insert the ignition key and turn it to "ON" (not the start) position.
2. Press the brake pedal.

Note: If the brake pedal is pressed before the key is in the ON position, the engine will shut down.

TEMPORARY STOP FEATURE:

This feature allows the vehicle to remain running after the key has been removed from the ignition. This feature is useful for occasions when you wish to exit and lock the vehicle for short periods of time, but would like to leave the motor running and the climate control on.

1.Before turning off the engine, press the ✱ button twice on the transmitter and the LED indicator will flash 3 times to confirm enter.
2.Turn the ignition key to OFF position. (The engine will stay running.)
3.The engine will run until the pre-programmed time elapsed or shutdown input is received.

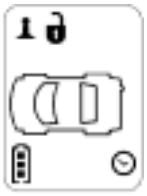
TIMER START:

This unit can be programmed to start and run the engine every 3 (2) hours, the engine will run for the programmed running time and then shut down.

IMPORTANT: Timer Start should be used only in open areas, never start and run the vehicle in on enclosed space as a garage or carport.

This feature is design for an extreme cold climate usage. The system will auto start the vehicle every 3 (2) hours, to prevent engine freezing and hard to start. A MAXIMUM OF SIX CYCLES CAN OCCUR.

ENTER:



1. Press the ✱ button twice to remote start the vehicle. As soon as the vehicle is running and the parking light have turned on or flashing.
2. Immediately depress the 🚗 button once, within 2 seconds
3. Rapidly depresses the ✱ button. The parking light will flash (3) times. The horn chirps (3) times. The vehicle is now programmed to start every 3 (2) hours.
4. Press the brake pedal to stop the vehicle running.

Exit the timer start:

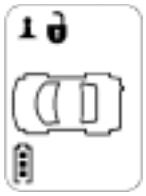
Timer start can be exited manually as follows:

1. Make sure the remote start system is not operating the engine.
2. Turn the ignition on. The LED and parking light will flash (4) times. The horn chirps (4) times.

Or

1. Press the ✱ button twice to remote start the vehicle. As soon as the vehicle is running and the parking light have turned on or flashing.
2. Immediately depress the 🚗 button then press and hold the ✱ button for 2 seconds. The parking light will flash (4) times. The horn chirps (4) times. The vehicle is no longer programmed to start automatically.

TO TURN OFF THE REMOTE START:



When the engine is running (by remote start), if you want to stop it,

1. Press ✱ button twice on the remote transmitter under remote start mode.
2. Move the optional remote start enable toggle switch to OFF position. (If installed)
3. Press the brake pedal.

The vehicle will shut down and turn off the parking light to indicate engine stopped.

SHUT-DOWN INPUT FOR REMOTE STARTER:

If any of the following conditions exist while the system is operating, the engine will not start or will shut down immediately:

1. The hood is opened.
2. The brake pedal is pressed.
3. Engine is over-revved. {"Tachometer checking type" only}
4. The pre-programmed run time (5 /10 / 20 / 30 minutes) has elapsed.
5. Press ✱ button twice on the remote transmitter under remote start mode.
6. Move the optional remote start enable toggle switch to OFF position. (If installed)
7. The vehicle refused to start running after {3} unsuccessful attempts.

DISABLING THE REMOTE START SYSTEM: (If installed)

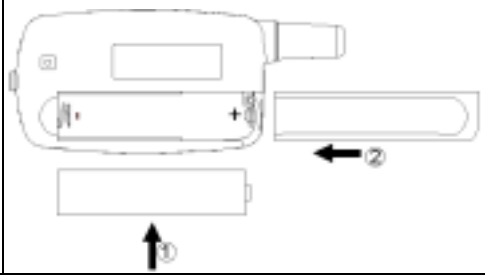
This feature allows your system's remote start unit to be temporarily disabled to prevent the vehicle from being remote started accidentally. This feature is useful if the vehicle is being serviced or stored in an enclosed area. To disable the remote start, move the optional remote start enable toggle switch to the OFF position.

LCD REMOTE TRANSCEIVER

Note: If the system is interfered by stronger radio frequency around, sources of high voltage electric power or such Obstacles like tall buildings and so on, the transmission range may get shorter as the system uses low out put powered frequency.

BATTERY REPLACEMENT:

A 1.5V type AAA Alkaline battery powers the Remote Transceiver. When the power of the battery weakens a icon shall be displayed on the LCD screen.



THE REMORE LCD ICONS WITH FUNCTION:

Door Lock
Your vehicle doors are locked

Door Unlock
Your vehicle doors are unlocked.

Remote Transmission
You are transmitting the signal to control unit

In – Range Indicator
The system within the remote control range.

Engine Starting
Your vehicle engine starting by remote control

Engine Running
Your vehicle's engine is running

Timer Control Start
Engine start will automatically every 2 / 3-hour.

Vibration Mode
Remote Control vibrates when the system is triggered

Low Battery
You have to replace the battery of remote control.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions.

1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.

Per FCC 15.21, you are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

"Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

This Class B digital apparatus complies with Canada RSS-210.

Cet appareil numérique de la classe B est conforme à la norme CNR-210 du Canada

The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment. (DoC)

The term " IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.