TIP SHEET

Installation Tips for RS1 + INTSL (2)

T0751

- Buick Century: 2000-2005
- Buick LeSabre: 2000-2005
- Buick Park Avenue: 1999-2005
- Buick Ranier: 2004-2007
- Cadillac Escalade: 2003-2007
- Chevrolet Avalanche: 2003-2006
- Chevrolet Silverado: 2003-2006
- Chevrolet Silverado Classic: 2007
- Chevrolet Suburban: 2003-2006
- Chevrolet Suburban Classic 2007
- Chevrolet Tahoe: 2003-2006
- Chevrolet Trailblazer: 2002-2008
- GMC Envoy: 2002-2008
- GMC Sierra: 2003-2006
- GMC Sierra Classic: 2007
- GMC Yukon: 2003-2007
- Hummer H2: 2003-2007
- Oldsmobile Aurora: 2000-2003
- Oldsmobile Bravada: 2002-2004

Thank you for purchasing your remote start from MyPushcart.com - an industry leader in providing remote starts to do-it-yourself installers since 1999. We've put this tip sheet together to help you with your installation. The purpose of this sheet is to help you organize your installation - not to replace your installation manual. You will still need to refer to that.

If you provided us with your vehicle model/year at the time of purchase, you will have a wiring chart for your particular vehicle. We're going to refer to that a lot. If you do not have the wiring chart, email us at sales@mypushcart.com so we can send you a copy. Be sure to include the model/year of your vehicle, your name and your sales order number.

Two very important things before you get started:

- Read the entire installation manual. There are several safety tips there that you need to know before you start
- Avoid using a test light to probe wires. Test lights can set off air bags if you probe the wrong wire. Your vehicle wiring chart will identify the correct wires that you'll be tapping on to in your car. If you must probe, use a digital multi-meter. They're inexpensive and won't set off air bags.

Overview

There are 4 basic steps to this remote start installation. We're going to address each of these:

1. Wiring
2. Programming
3. Testing
4. Close it up!

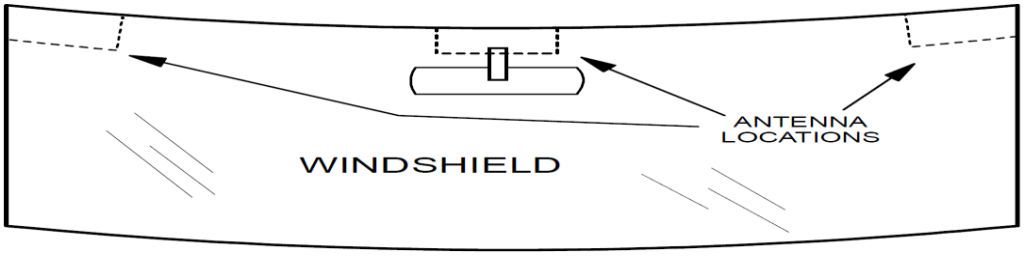
Need to know where all the components go? See Installer's Tip #1

Step 1 – Wiring

When you open up your remote start, you're going to see a whole bunch of wires. You're not going to use all of them. The remote starts are designed with wiring options for a variety of cars and no car is going to use all of them. We're going to break the wiring down into three parts – your main power connections, what we'll call your 'secondary' connections for your remote start, and connections for the bypass module.

Your wiring chart will help you locate the wires that you're going to need in your car. Don't be intimidated by all the different wires listed on the chart – you're only going to be using a few of them.

You also have an antenna, a small pushbutton and a status LED. The antenna should be mounted near the top of the windshield, at least 1" away from metal. Route the antenna cable underneath the headliner, down the windshield pillar and around the end of the dash. Carefully tuck the cable in behind the trim panels. The pushbutton is typically mounted in the driver's kick panel (that's the area forward of the door), the driver's side of the center console, or the underside of the dash. Installation requires drilling a small hole in the plastic. The LED is not required for operation, but is helpful for programming or diagnostics. It also requires a hole and can be placed either near the pushbutton or on top of the dash.



Reading your wiring chart

Each line of the wiring chart contains 3 pieces of information that you will need:

A) The "Circuit" or "Wire/Function"
B) The color of the wire in the car
C) The polarity of the wire in the car
D) The location of the wire in the car

A	B	C	D
12volts	white	+	ignition harness
Starter	black/white	+	ignition harness
Second Starter	N/A		
Ignition	black/yellow	+	ignition harness
Second Ignition	N/A		

Making your wiring connections

The table on the following page will show you where to connect the wires from your remote start into the car. Any wires on your remote start that are NOT listed in the table are NOT USED.

Helpful Hint: In most cases, the wires on the remote start are way longer than needed. Trim off excess wire when you make your connections, but leave some slack - this will allow you a little flexibility when it comes time to stow the remote start module after the installation is completed.

See Installer's Tip # 2 for tips on how to make your wiring connections

Remote Start Wire		Connect to the wire for the circuit on the vehicle chart labeled:
Red (6-pin harness, 2 wires)		Constant 12 Volts
Pink (6-pin harness)		Ignition 12-Volts
Brown (6-pin harness)		Starter
Grey (6-pin harness)		Accessory
Pink/White (6-pin harness)		Ignition # 2 (not present on all vehicles)
Black (12-pin harness)		System Ground – connect this to a solid metal ground in the car
Red/Black (12-pin harness)		Connect to +12volts *or* Ground. *OPTIONAL (See NOTE 1)
White (12-pin harness)		Parking Lamp *OPTIONAL (See NOTE 1)
Purple (12-pin harness)		Brake Light (also called "Brake Switch")
Grey (12-pin harness)		Hood Input (See NOTE 2)
Red/White (12-pin harness)		Tach (to INTSL – NOT to the vehicle)(programming required)

- **NOTE 1** Some vehicles will call for a '+' polarity connection to the parking light circuit and some will call for a '-' connection. The red/black wire on the remote start is used to select the polarity of the remote start's parking light output. If your vehicle's parking light wire is shown with a '+' on your wiring chart, connect the red/black wire to a constant +12v power source (you can tap it right on to one of the large red power input wires on the remote start's 6-pin harness). If your vehicle's parking light wire is shown with a '-' on your wiring chart, connect the red/black wire to ground. The white wire in the remote start 12-pin harness is the actual parking light output wire. After you've properly selected it's polarity using the red/black wire, connect the white wire to the parking light wire in your vehicle, as indicated on your wiring chart.
- **NOTE 2** The grey wire is used with a pin switch (included in your kit) to prohibit the remote start from activating while the hood is open. This is an important safety feature!

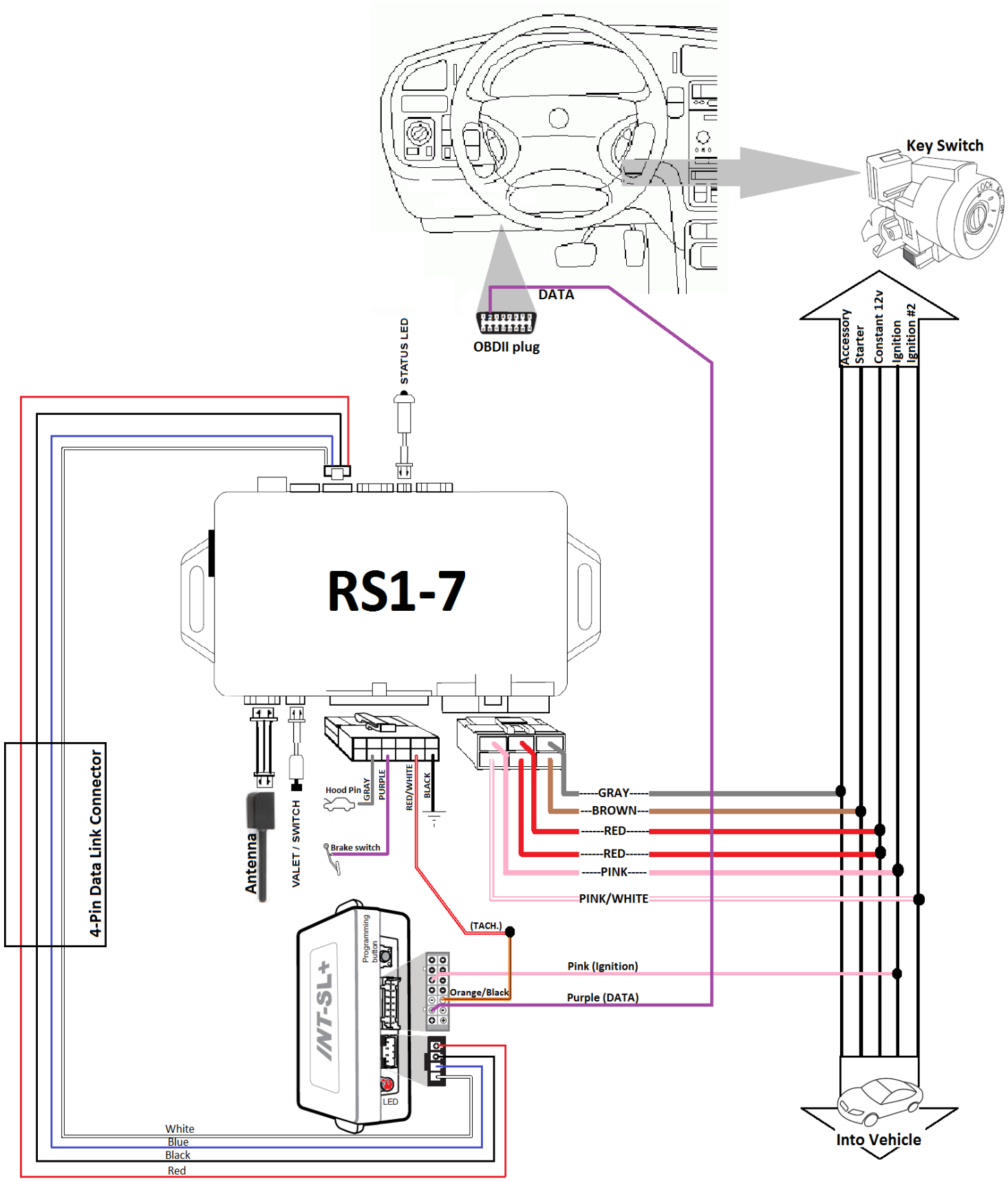
➢ Helpful Tip: Many GM Vehicles have a brown wire in the ignition harness that will show on the wiring chart as a 2nd or 3rd ignition or a 2nd accessory. This wire is NOT used for remote start. The three wires that do need to be powered by the remote start's ignition and accessory outputs are white, pink and orange. Be sure to test!

Wiring your bypass

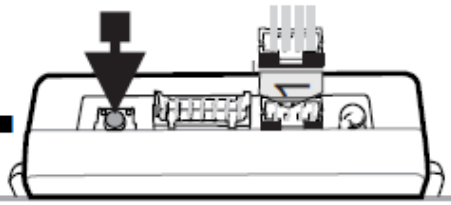
The following table will show you what wires on the Module need to be connected and where they connect. Any wires on your module that are NOT listed in the table are NOT USED.

INTSL module Wire:	Connect to:	NOTE:
Pink (14-pin plug) (ignition)	remote start -Pink (6-pin plug) (ignition)	Connects to main Vehicle ignition
Orange/Black (14-pin plug) (tach)	remote start -Red/White (12-pin plug) (tach)	Remote start tach programming required- see programming section.
Purple (14-pin plug) (data)	back of Pin 2 on your ODB2 plug (data)	Do not use tap connectors here. Wire wrap or solder connection.
4-pin data link connector	Data port of remote starter	Plug into both INTSL and remote start

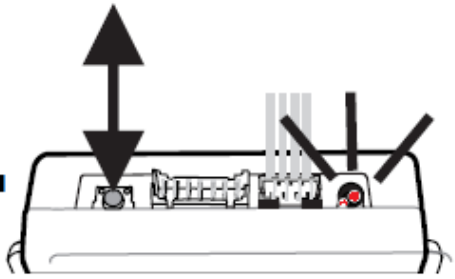
➢ The following diagram illustrates all of your needed connections. As always, it is the responsibility of the installer to verify all vehicle wiring using the vehicle wiring chart and a multi-meter prior to making any connections:


Key Switch
DATA
OBDII plug
STATUS LED
Accessory
Starter
Constant 12v
Ignition
Ignition #2
RS1-7
4-Pin Data Link Connector
Antenna
VALET / SWITCH
Hood Pin
GRAY
PURPLE
RED/WHITE
BLACK
Brake switch
-----GRAY-----
---BROWN---
------RED------
------RED------
-----PINK-----
PINK/WHITE
(TACH.)
Pink (Ignition)
Orange/Black
Purple (DATA)
Programming button
LED
White
Blue
Black
Red
Into Vehicle

Step 2 – Programming: INTSL Programming:

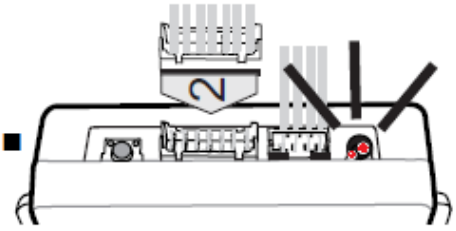
1. 

Press and hold the programming button. Plug in the **connector 1** in the INT-SL+ interface.

2. 

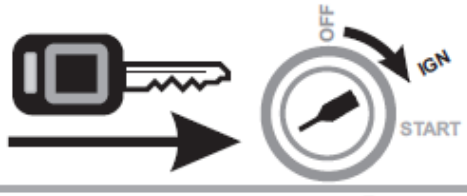
The LED will turn on, indicating the beginning of programming.

Release the programming button.

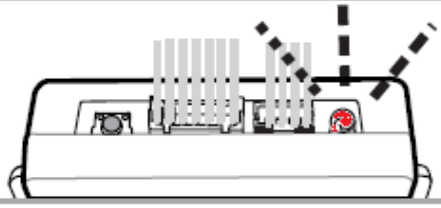
3. 

Plug the **connector 2** into the INT-SL+ interface.

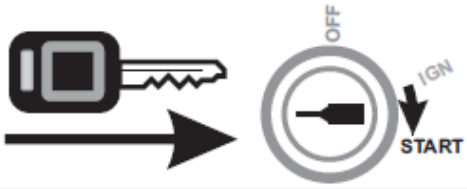
WARNING: Connector 2 can be easily plugged in backwards.

4. 

Turn the key to the ignition position.

5. 

The LED will flash. (Note: Some vehicle can take 60 seconds before the LED flash)

6. 

Start the vehicle with the key.

7. 

The LED will turn off.

8. 

Turn the key OFF.

The interface is programmed.

RS1 remote starter programming:

The remote starter will need to have the tach signal of the vehicle programmed. Using your key, the valet button, and vehicle brake pedal, follow the procedure below to program the tach:

TACH PROGRAMMING:

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

- Aside from tach learning above, the RS1 should work with the default options set as they are, so no programming is required for basic remote start operation. If you wish to change any options to customize the functionality of the remote starter, a matrix of all programmable features and their options are on the following page. Use the procedure below to make any desired changes:

1. Turn Ignition Key to the ON position. Do not start vehicle.
2. Press the Program / Valet button 5 times. Wait for the unit to flash the lights and/or horn honk 5 times.
3. Push the valet program button the number of times that corresponds to the option number desired
4. ***For RS1:*** When you reach the desired option #, to change the option: Press the brake pedal the amount of times that corresponds to the value of the option.
5. When finished, turn Ignition OFF, and check for changed features.

OPTION PROGRAMMING TABLE

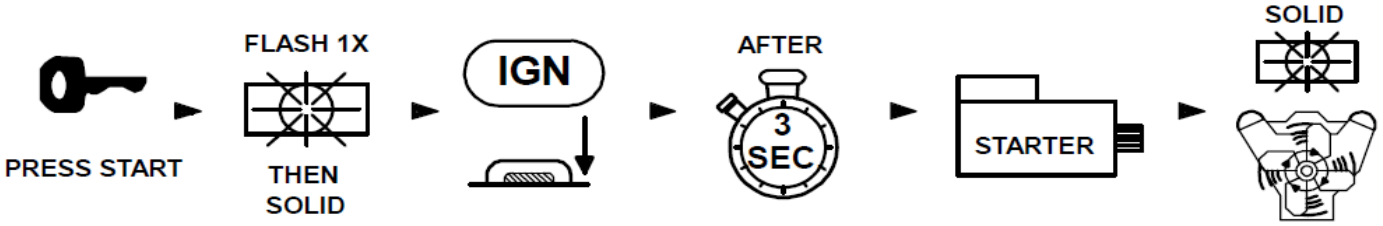
Option #	Option Description	TX Button #1 (Lock)	TX Button #2 (Unlock) Default Value	TX Button #3 (Trunk)	TX Button #4 (Start)
1	Engine Monitoring	Tach	*Tachless*		Hybrid
2	Autolock with RPM / Ignition	ON	*OFF*		
3	Door Lock Pulse	3 Seconds	*0.50 Seconds*	Double Unlock	"Wake Up" pulse with Unlock
4	Pink/white Wire Selection	ACC	*IGN*	START	
5	Data Port Protocol	ADS iDatalink - OFA Series	*Fortin - EVO / SL Series*		
6	Remote Start Button Selection	Double Button Press	*½ Second Press*	Press 2 seconds & release	
7	Horn Chirps on Remote Start	ON	*OFF*		
8	Lock with Remote Start / Abort	OFF	*Lock after Remote Start*	Lock after Remote Start and Arm OEM Alarm with Abort	Lock / Arm OEM Alarm with Abort
9	Brown wire function	Dome Light	*Trunk pop*	Double Press Trunk	Press and Hold 2 seconds
10	Unlock before Remote Start (to Disarm OEM Alarm)	ON	*OFF*		
11	Transmission Type	Manual Transmission with Remote Control	*OFF*	Manual Transmission set with Hand Brake	Manual Transmission with auto shut down after door closed
12	Idle Down Timer	10 Minutes	*20 Minutes*	30 Minutes	Infinity Run
13	Horn Chirp Confirmation	1 Press	*2 Press*		
14	Unlock with Trunk Pop	Unlock/Trunk Pop	*Trunk Pop only*		
15	30 Sec. Park Lights with Unlock	OFF	*ON*		
16	Horn Pulse (Chirp)	15 milliseconds	*20 milliseconds*	40 milliseconds	
17	OEM Interface Green input wire	3 pulse start with OEM remote thru Data	*1 Pulse*		
18	Minimum Starter Cranking Time	(-) 0.1 Seconds	*0.8 Seconds*	(+) 0.1 Seconds	(+) 0.4 Seconds
19	Diesel Glow Plug Delay	10 Seconds	*Monitor Glow Plug*	15 Seconds	20 Seconds
20	Remote Start Engine Run Time	10 Minutes	*20 Minutes*	30 Minutes	5 Minutes
21	Smart Tachless Voltage Adjustment 79-100%	-1%	*Set to 93% default*	+1%	
22	Turbo Timer Mode	1 Minute	*OFF*	3 Minutes	5 Minutes
23	Unlock on Start Button with Ignition ON	Momentary press = Unlock 2 Sec. press = Abort Start	*OFF*		
24	Orange/white wire Selection	IGN	*ACC*	AUX 2	
25	Orange Wire Selection	AUX 2	*OEM Arm*		
26	1-Way or 2-Way System	2-Way	*1-Way*		
27	1 or 2 VEH Mode	2 VEH Mode	*1 VEH Mode*	In 1 VEH Mode, the Red and Blue LED on Remote Control operate the same vehicle	
28	Reset Options to Default (*)	*Reset Options 1 thru 25 (2 Flashes)*			

Step 3 - Test the System

Once all programming is done, you should test the system to make sure everything is working properly before you connect the activation wire and close up the installation.

REMOTE ENGINE STARTING – SUCCESSFUL START:

1) Press the remote start button for at least ½ second (*default). Parking lights flash once, return solid, and the Ignition/Acc circuits turn on.



2) After a few seconds the Starter Motor engages.
3) Engine Starts and Runs.
4) Engine will remain running for programmed run time until reset with Brake pedal. If needed, the engine can be turned off with remote transmitter by pressing and releasing the Start button.

- ☑ Make sure the vehicle stays running, and that the climate controls are working.
- ☑ Press the brake pedal > The engine should shut down.
- ☑ If your tests are successful proceed to "step 4 - close it up" below.
- ➢ If your tests were unsuccessful, go back and re-check your wiring and programming.

Step 4 – Close it Up!

Now gather up all your wiring and neatly bundle it together using zip ties or electrical tape. Find a secure place to put the remote start module and use zip ties to secure it. **Make sure that the remote start wires are not near any moving parts on the steering wheel, pedals or emergency brake!** Replace all interior vehicle panels that were removed to gain access to the needed wires, in reverse order they were removed.

Installer's Tips

Tip #1 – Where Everything Goes

There are 4 parts to your system:

1. *Remote start module* – the wiring for the module is done under the dash on the driver's side, so you'll want to install the module in that general area. Before you start wiring, look for a location where there's some open space that will fit the module. Pay attention to moving parts like the pedals, e-brake and steering column. Be sure to route your wiring away from those areas.
2. *Bypass module* – can be stowed along with the remote start.
3. *Valet Switch* – Requires a small screw hole. Usually put in the driver's kick panel (that's the area forward of the door), the driver's side of the center console, or the underside of the dash.
4. *Hood Pin Switch* – An important safety component! Requires a 3/8" hole. Find a location in the engine compartment to mount the switch where the closed hood will keep the plunger in the switch depressed. This is what prevents the car from starting when the hood is open.

Tip #2 – How to make your wiring connections

It's very important that all your wiring connections be solid and secure. All remote start connections are "tap on" connections. This means that you do not need to cut the wires in the car. You simply need to "tap on" to the wires in the car to make your connections. Here are three different ways to do this:

Method 1 – Solder and tape

This is the method preferred by the best professional installers. It makes for the most reliable connections, but it is also the most difficult to do. Sometimes there isn't enough room in the wiring harness to safely solder a wire without damaging adjacent wires, but if you have the soldering skills, go for it. To make a connection, strip back a section of the insulation on the wire in the car. On heavy gauge wires, 1" is about the right amount. On lighter gauge wires, ½" is fine. Strip 1" of insulation off the end of the remote start wire. Tin the bare section of wire in the car. Wrap the remote start wire around the tinned section and then carefully solder it in place. Wrap the splice tightly with electrical tape.

Method 2 – Wrap and tape

This is the most popular method and is also very reliable. Strip back a section of the insulation on the wire in the car. On heavy gauge wires, 1" is about the right amount. On lighter gauge wires, ½" is fine. Strip 1" of insulation off the end of the remote start wire. Separate the strands of the wire like this:

Pass the wire from the remote through the opening as shown below

Wrap the remote start wire around both sides of the car wire, then back around itself as shown below

Use electrical tape to wrap the connection and secure the wires together. A wire tie will help prevent the tape from unraveling in the future.

Method #3 – "T-Taps"

T-taps are plastic clips that are squeezed onto the wires in the car. The wire from the remote start goes into the tap and the whole thing is crimped together. T-taps come in different sizes for different size wires. Use yellow t-taps for the larger wires in your main power harness. Red t-taps are good for the smaller wires. Tape and wire tie the connections as shown in the "wrap and tape" section above – that will prevent the t-taps from ever opening up.

We now have a "tap kit" available for purchase for those who prefer to use this method. The kit consists of two types of connectors - The taps and insulated male spade connectors that plug into them. The taps attach to the wires in the car and the spade connectors attach to the wires on the remote start. The spades then plug in to the taps. A crimping tool is required.