Installation Tips for your Remote Start system (for GM vehicles) V3.4 revised 12/26/2014

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 in there that you need to know before you start
- Avoid using a test light to probe wires. Test lights can set off air bags and damage ECU's 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 or burn circuit boards.

Overview

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

1. Make your wiring connections for the remote start
2. Install the bypass
3. Test the system
4. Button it up!

Need to know where all the components go? See Installer's Tip #1 on page 7

Step 1 – Wiring your remote start

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 (if you're using one).

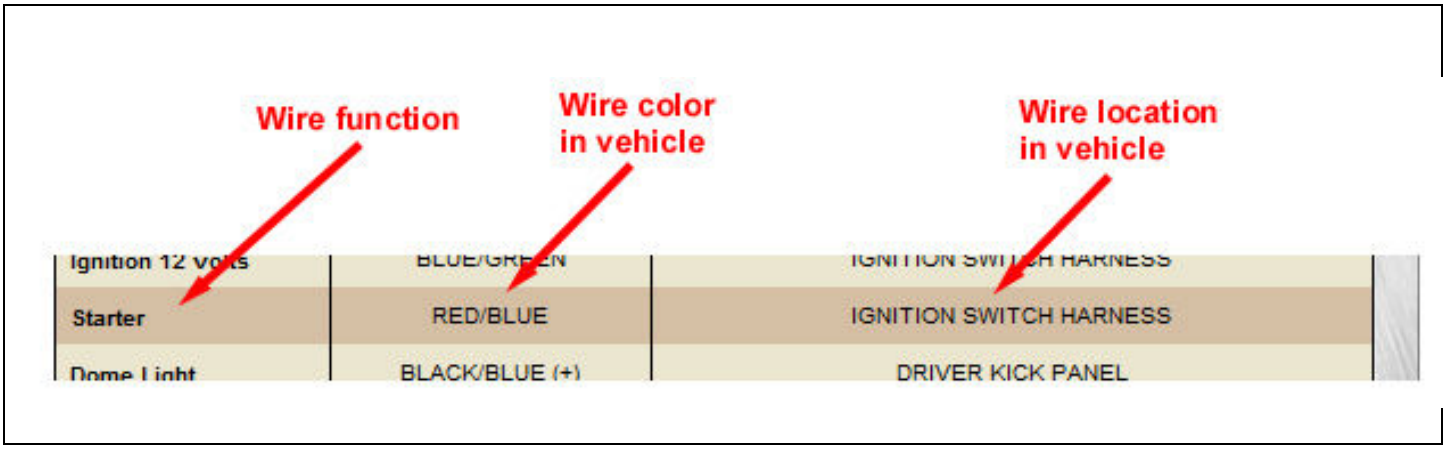
Here's where the vehicle wiring chart comes into play. The wiring chart will help you locate the wires in your car that you're going to use. Don't be intimidated by all the different wires listed on the chart – you're only going to be using a few of them. Your supplied wiring chart will come from Omega.

Reading your wiring chart:

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

- The “Circuit” or “Wire/Function”
- The color of the wire in the car
- The location of the wire in the car

The illustrations below will show you where to find that information on your chart.



Making your wiring connections

The table on the next page shows 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 on Page 7 for tips on how to make your wiring connections

For Excalibur Remote Starts

Remote Start Wire		Connect to the wire for the circuit on the vehicle chart labeled:
Red		Constant 12 Volts
Red/White		Constant 12 Volts
Violet		Starter (see NOTE 1)
Pink		Ignition
Pink/white		Ignition 2
12 Pin Harness		
White/Blue		Remote Start Activation (connect to lock motor wire)(see NOTE 2)
Black (12-pin harness)		System Ground – connect this to a solid metal ground in the car
Brown/Red (12-pin harness)		Brake Light (also called "Brake Switch")
Black/White (12-pin harness)		Neutral Safety – if you have an automatic transmission, ground this wire
Grey (12-pin harness)		Hood Input (See NOTE 3)
White		+ parking light output (see NOTE 4)
White/Black		- parking light output (see NOTE 4)
Blue (Red 3 Pin SAT. Relay Plug)		(-)brown – ground when running wire on the PLJX bypass module
		The connections below MAY be needed
Light Green/Red (12-pin harness)		OEM Alarm Disarm – *connect this if your car has a factory alarm system*
Violet/White (12-pin harness)		Tach Signal (See NOTE 5)
Green/Red (12-pin harness)		OEM Alarm Arm – *connect this is your car has a factory alarm system*

- **NOTE 1:** *ION*, *CANYON*, *COLORADO, COBALT, and PURSUIT* do not have starter wires. In those vehicles, the remote start Violet wire connects ONLY to the bypass Violet wire (see Step 2a)

- **NOTE 2:** This wire goes to the LOCK MOTOR WIRE, NOT THE LOCK wire in the vehicle (usually a grey wire in GM vehicles found in the drivers kick panel, but you need to verify using the vehicle wiring information chart and testing the wire in the vehicle)— save connecting this wire for last and use it to test the system (see page 5 of this tip sheet)

- **NOTE 3:** 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!

- **NOTE 4:** The remote start has two parking light wires. *You will only use one of them*. On your vehicle wiring chart, look up the wire for the parking lights. Next to the wire color will be either a "+" or a "-". If yours has the "+", then use the white wire. If it has a "-", use the white/black wire.

- **NOTE 5:** Most vehicles will not require this connection. The remote start has a 'tach sensing' circuit built in. The purpose of that circuit (or the tach wire if you need it) is to enable the remote start to detect when the engine has started so it will stop cranking the starter. When you test your system, if the starter keeps cranking after the engine has started, you'll need to connect the tach wire. Once the wire is connected, take two additional steps: 1) Change "Installer Programming Option # 3 to the 'tach wire' setting (see page 11 in the installer's manual). 2) Program the tach circuit as shown on page 10 of the installation manual for the RS-140).

Your kit also includes a programming button. Plug the button into the remote start. For tips on where to install the button, see Installer's Tip #1 on Page 7

Step 2a- Installing your bypass – Saturn ION, GMC Canyon, Chevy Colorado, Cobalt & Pursuit Only (all other vehicles see Step 2b):

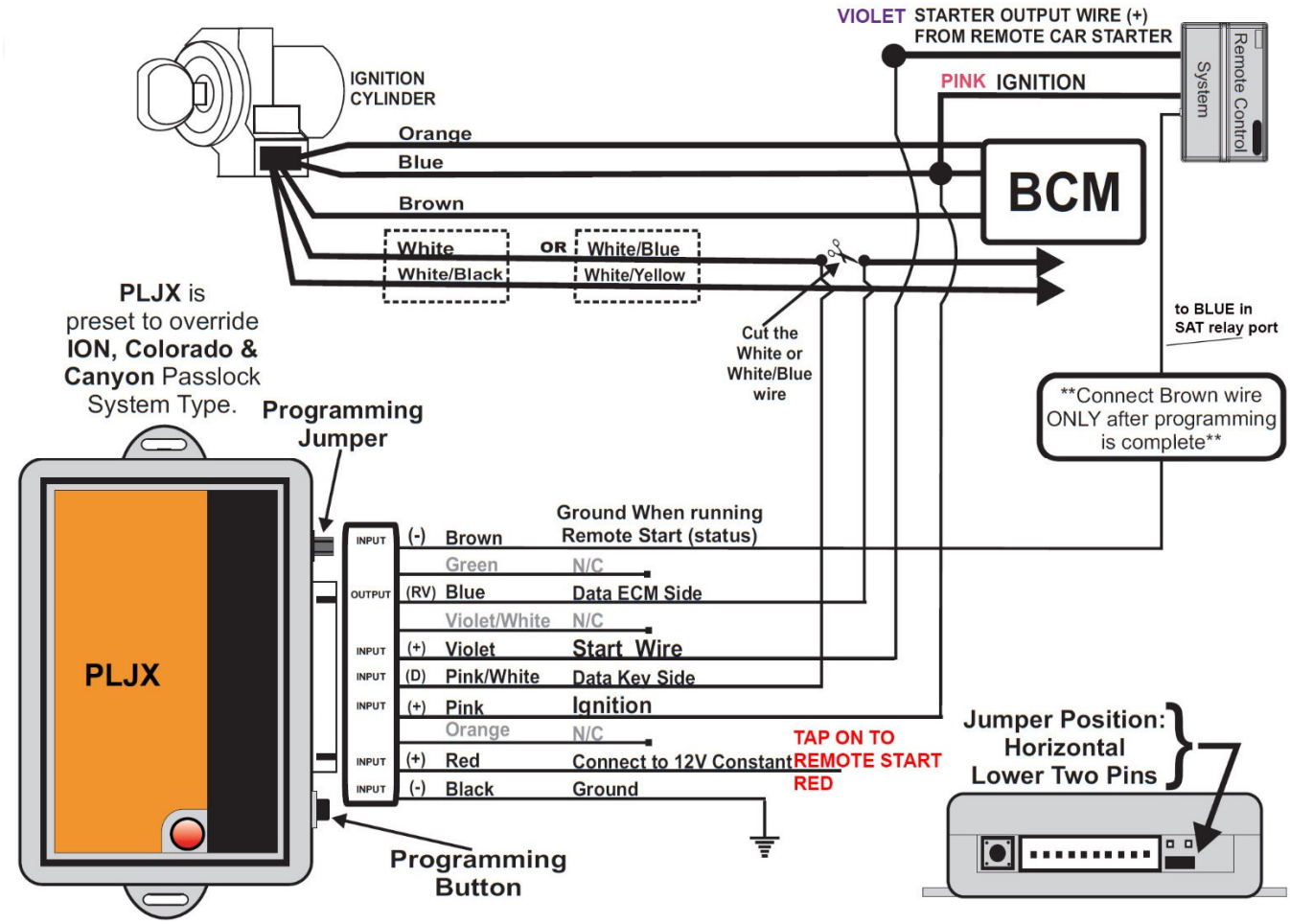
The PLJX bypass requires 3 connections to the vehicle and 4 to the remote start. Connections are made at the immobilizer near the key barrel or 8 inches lower on the immobilizer harness.

Locate the Data wire, which will be either white or white/blue. Cut the wire – we will refer to the resulting two 'halves' as the 'key side' (the half of the wire going toward the ignition key cylinder) and the 'vehicle side'.

Bypass Wire		Connect to Wire On Remote Start
Brown		Blue – Status (-) output in 3 pin sat. relay port (red plug) (see NOTE 1)
Violet		Tap on to Violet in 6-pin harness
Red		Tap on to Red in 6-pin harness
Pink		Tap on to Pink in 6-pin harness
Bypass Wire		**Connect to Wire In Vehicle**
Black		Ground
Pink/White		Key Side of data wire (white or white/blue)
Blue		Vehicle Side of data wire (white or white/blue)

NOTE 1: DO NOT connect brown wire to remote starter until after RESISITOR CODE programming is complete.

-Suggestion: Don't use tap connectors on the Data and other wires coming off the key lock cylinder connector. The wires are small and sometimes a tap connector won't make good contact. We suggest you either wrap and tape or solder and tape these connections. See Installer's Tip #2 on page 7.



Program the Bypass (Saturn ION, GMC Canyon, Chevy Colorado, Cobalt & Pursuit Only)

Make sure you have one of your keys and your remote fob handy, as the programming actions MUST be done within only a few seconds. ***Read through the instructions first*** before actually doing the programming! It will help enable you to complete the steps within the specified time.

1. With the BROWN wire from the PLJX to the remote start DISCONNECTED, start the vehicle with the key and keep the key turned all the way in the START position until programming is complete. Don't worry – the starter will not over crank.
2. Press and hold the programming button on the PLJX. The LED will come on solid, then start to flash rapidly.
3. Once the LED stops flashing and turns solid, release the programming button and turn the ignition key to the OFF position.
4. Your Passlock resistor code is now programmed. Connect the BROWN wire from the PLJX to the BLUE wire in the remote start SAT Relay Port.

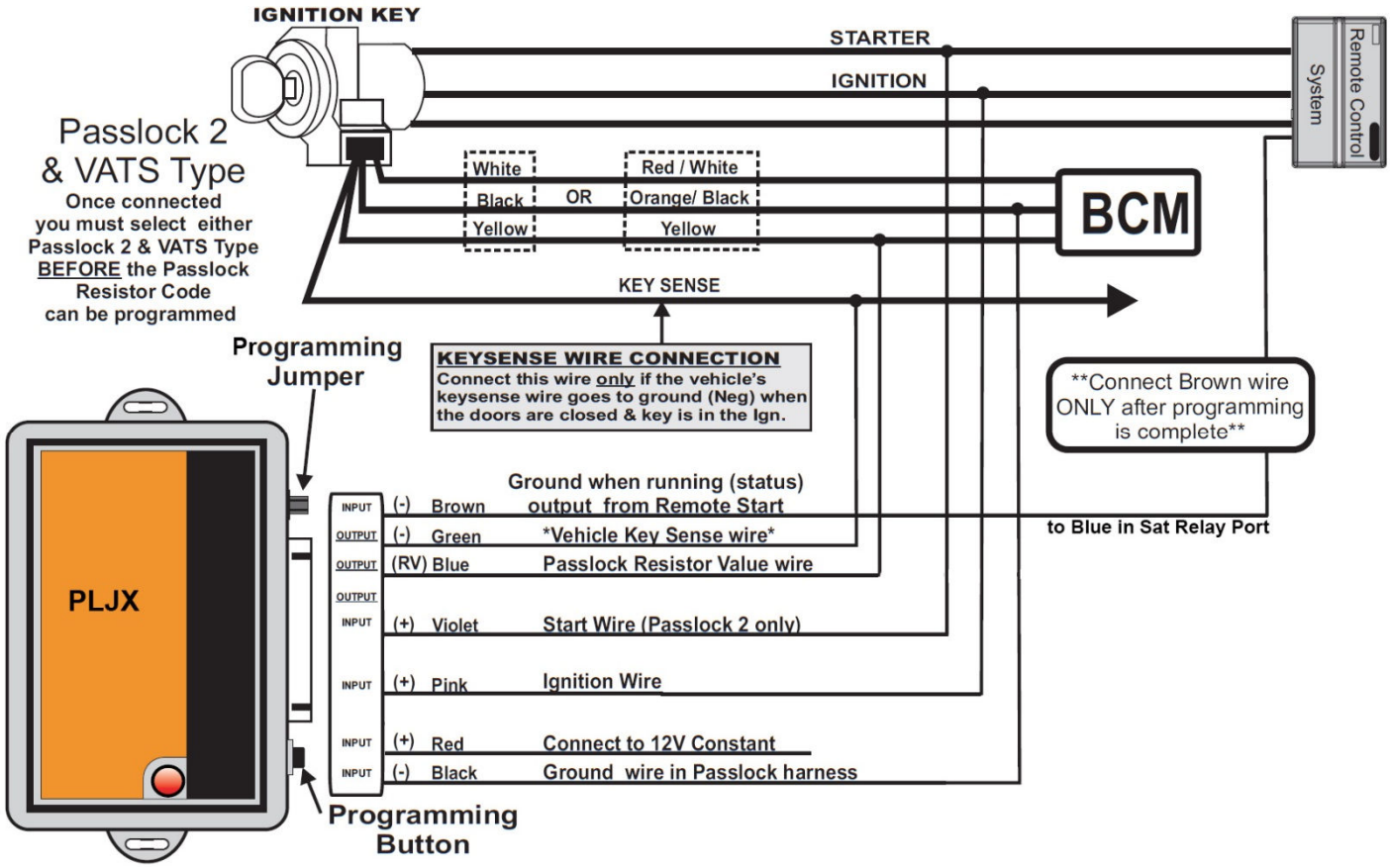
Step 2b- Installing your bypass – all other vehicles EXCEPT Saturn ION, GMC Canyon, Chevy Colorado, Cobalt & Pursuit

Bypass Wire		Connect to Wire On Remote Start
Brown		Blue – Status (-) output in 3 pin sat. relay port (red plug) (see NOTE 1)
Violet		Tap on to Violet in 6-pin harness
Red		Tap on to Red in 6-pin harness
Pink		Tap on to Pink in 6-pin harness
Bypass Wire		**Connect to Wire In Vehicle**
Black		Ground
Green		Key Sense
Blue		Resistor value wire (yellow)

NOTE 1: DO NOT connect brown wire to remote starter until after RESISITOR CODE programming is complete.

-Suggestion: Don't use tap connectors on the Data and other wires coming off the key lock cylinder connector. The wires are small and sometimes a tap connector won't make good contact.

See wiring diagram on next page.



Program the Bypass (All vehicles EXCEPT Saturn ION, GMC Canyon, Chevy Colorado, Cobalt & Pursuit)

Make sure you have one of your keys and your remote fob handy, as the programming actions MUST be done within only a few seconds. ***Read through the instructions first*** before actually doing the programming! It will help enable you to complete the steps within the specified time.

1. Set the jumper on the PLJX as shown on the preceding page.
2. With the BROWN wire from the PLJX to the remote start DISCONNECTED, start the vehicle with the key.
3. Press and hold the programming button on the PLJX. The LED will come on solid, then start to flash.
4. Release the programming button and turn the ignition key to the OFF position.
5. Your Passlock resistor code is now programmed. Connect the BROWN wire from the PLJX to the BLUE wire in the remote start SAT Relay Port.

Step 3 – Test the System

Once all your connections are made, and the bypass has been programmed, you should test the system before putting everything back together.

1. Use the unconnected white/blue wire (remote start activation) on the RS-1XX to test your system by touching it to ground 3 times > this will tell the RS-1XX to begin the remote start process.
   a) If your vehicle starts you are ok to make the connection to your lock motor wire. Once the connection is made to your lock motor wire, give the system a final test: activate your remote start by pressing lock 3 times on your factory remote.

b) If your vehicle does not successfully start then verify that all connections and programming are correct on the remote start and bypass module and try again.

2. Once you achieve a successful remote start using your transmitter, proceed to step 4.

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!**

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. *Programming button* – Requires a ¼" 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.

Did you find this document helpful? Please let us know so we can continue to improve our service to you. Suggestions are welcomed and encouraged! Please email to sales@mypushcart.com

Need tech support? Call us at (520) 572-2220 M-F, 9AM-5PM Arizona Time