



TIP SHEET

Installation Tips for SP-502 + EVO-CHR4 (A) Remote Start / Alarm

T1630

Chrysler 300 (2008-2011)	Dodge Magnum (2008)
Chrysler Town and Country (2008-2015)	Dodge RAM (2009-2012)
Dodge Challenger (2008-2014)	RAM CV (2010-2016)
Dodge Charger (2008-2010)	Jeep Commander (2008-2011)
Dodge Durango (2011-2013)	Jeep Grand Cherokee (2008-2016)
Dodge Grand Caravan (2008-2016)	Volkswagen Routan (2008-2014)
Dodge Journey (2008-2010)	

REGULAR KEY VEHICLES ONLY* *AUTOMATIC TRANSMISSION VEHICLES ONLY

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.

Overview

There are a lot of wires that come with your kit, you will use very few of them.

There are 5 basic steps to this remote start installation. We're going to address each of these:

1. Preparation
2. Wiring connections
3. Programming
4. Test the system
5. Button it up!

Step 1 – Preparation

□ Carefully remove the needed panels to access your vehicle key switch plugs. Some vehicles will have the key switch mounted on the steering column, while others will have the key switch located on the dash. For vehicles with the key switch located on the steering column, remove the steering column shroud plastic to gain access to the key switch plug. If the key switch is mounted on the dash, it may be necessary to remove the radio to gain access to the key switch to the left of the radio cavity. Your kit comes with a rechargeable 2-way LCD remote. It is a good idea to plug this in and start charging it before beginning your install, so it is ready to use by the time you are done. The 2-way remote must be turned on by pressing and holding the unlock button for 2 seconds, and can be turned off by pressing and holding unlock for 5 seconds. For instruction on how to adjust the clock, beep, and vibrate settings on the 2-way remote itself, along with other operational info, refer to the operation instructions booklet that comes in the box with your SP-502 remote start unit.

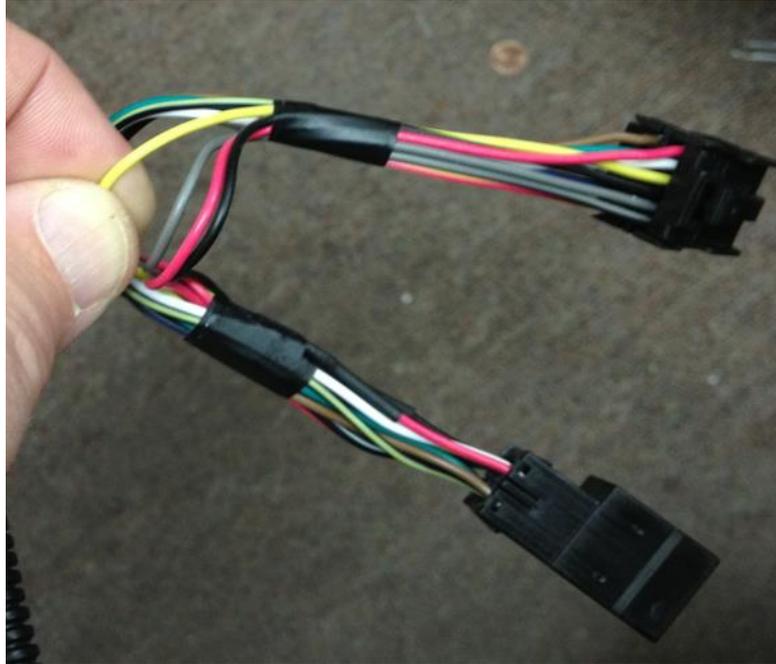
Step 2 – Wiring Connections

REQUIRED:

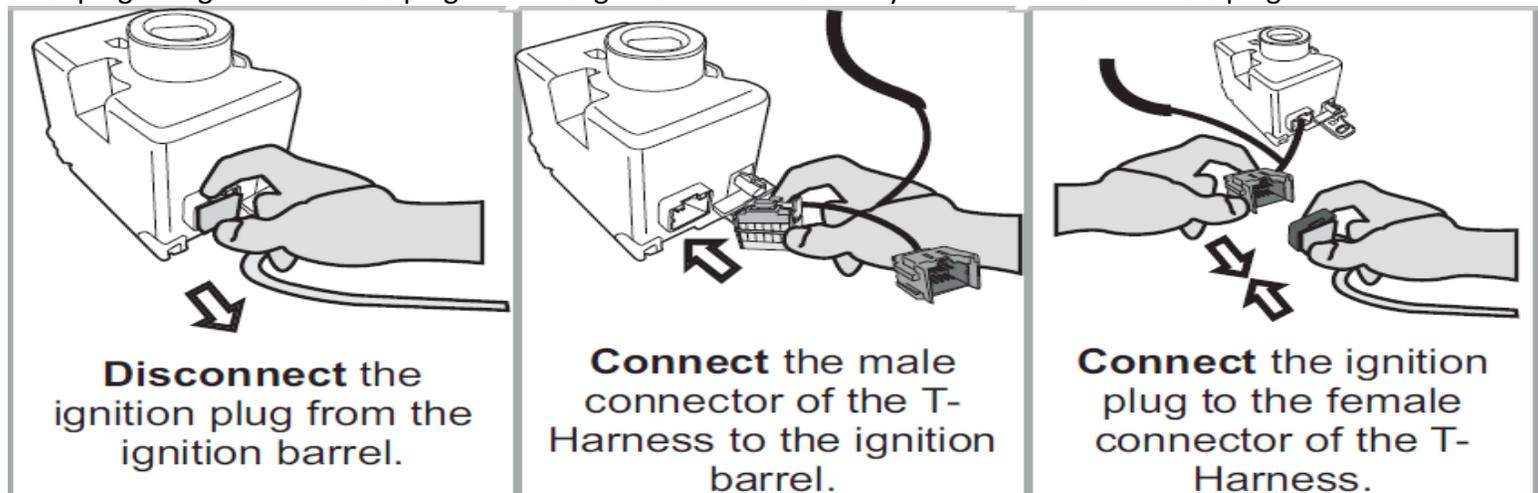
1: Connect the Yellow wire, loose from the t-harness to both the Yellow wire in the 20-pin plug of the EVO-ALL, and the Pink wire in the 6-pin plug of the **SP-502** unit. All 3 wires must connect together.

2: a) If your vehicle is model year **2010 or older**: locate the yellow wire that goes between the male and female plugs in the t-harness (see photo below). **CUT** the yellow wire in half, and connect the yellow/green wire from the red 6-pin plug of the EVO-ALL to the side of the yellow wire cut that is in the T harness plug that attaches to the key switch. Tape off the cut yellow wire that is on the vehicle T harness side of the cut to prevent shorting out.

b) If your vehicle is **2011 or newer**, **SKIP** this connection.



3: Unplug the ignition harness plug from the ignition switch assembly and insert the t-harness plugs.



4: The black 4-pin plug (with locking tab) from the t-harness, and the antenna will need to connect to the SP unit.

5: The black 4-pin plug (without the locking tab), the red 6-pin plug, and the White 5-pin plug from the t-harness will all plug into the corresponding receptacles on the EVO-ALL, along with the white 20-pin plug.

- No plugs need to be connected to the EVO-ALL yet – wait until it's time to begin programming.

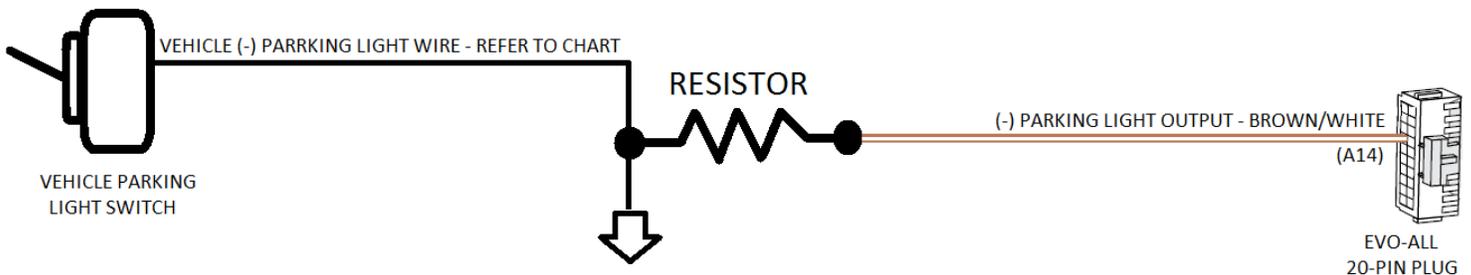
OPTIONAL:

- PARKING LIGHT WIRE:** visual indicator - Most newer vehicles have running lights that automatically come on when the vehicle is running, eliminating the need for a wired connection from the remote starter. This feature is optional and does not affect the operation of the remote start. If your vehicle's running lights DO NOT automatically turn on, you can have the remote start turn them on for you. The following chart shows the parking light wire color, location, polarity and resistor value (if needed) for the covered vehicles:

CHRYSLER	PARKING LIGHT
300-300C	(-)PARKING LIGHT WHITE/BROWN PARKING LIGHT SWITCH HARNESS 2K OHM RESISTOR
Town & Country	(-)PARKING LIGHT WHITE/BROWN PARKING LIGHT HARNESS 1K OHM RESISTOR
DODGE	PARKING LIGHT
Challenger	(-)PARKING LIGHT WHITE/BROWN PARKING LIGHT SWITCH HARNESS 2K OHM RESISTOR
Charger	(-)PARKING LIGHT WHITE/BROWN PARKING LIGHT HARNESS 1K OHM RESISTOR
Durango	(-)PARKING LIGHT PINK/RED PARKING LIGHT HARNESS 1.5K OHM RESISTOR
Grand Caravan	(-)PARKING LIGHT WHITE/GREEN PARKING LIGHT HARNESS 1K OHM RESISTOR
Journey	(+)PARKING LIGHT WHITE/PURPLE PASSENGER RUNNING BOARD HARNESS
RAM	(-)PARKING LIGHT WHITE PARKING LIGHT HARNESS 1K OHM RESISTOR
JEEP	PARKING LIGHT
Commander	(-)PARKING LIGHT RELAY CENTER UNDER HOOD
Grand Cherokee	(+)PARKING LIGHT WHITE/TAN DRIVER KICK PANEL
VOLKSWAGEN	PARKING LIGHT
Routan	(+)PARKING LIGHT RED AND OPEN GREY/RED

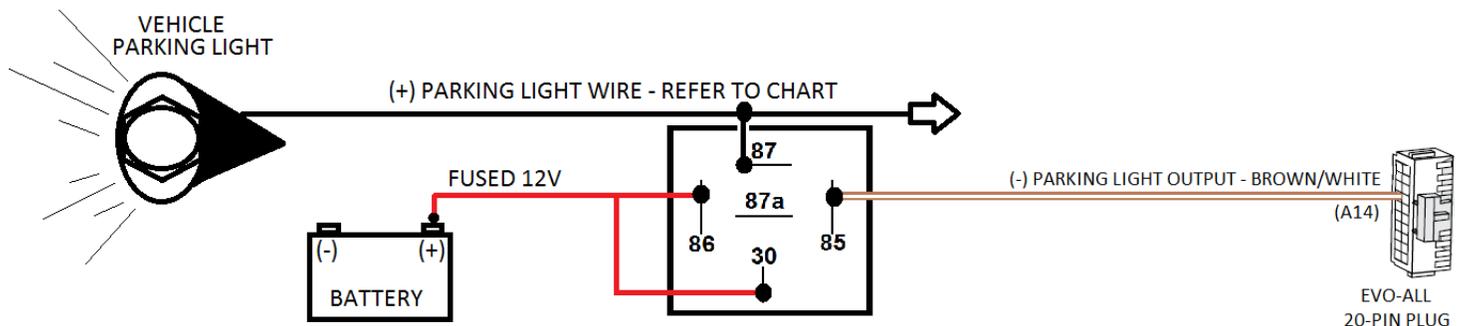
1. If the vehicle has a negative (-) polarity parking light circuit:

- Connect the Brown/White (-) parking light output wire from the EVO-ALL 20-pin plug to the (-) vehicle wire, through a resistor of the corresponding value listed on the chart above. See below:



2. If the vehicle has a positive (+) polarity parking light circuit:

- Connect the Brown/White (-) parking light output wire from the EVO-ALL 20-pin plug to a relay. Connect the relay configured to output (+) to the corresponding (+) vehicle wire listed on the chart above. Because the vehicle parking lights pull more than 10 amps, connect the supply power input of the relay directly to the (+) battery post, through the appropriate fuse. Do not use supply power from the T harness.



- VALET SWITCH:** Convenience feature – Allows to you to easy disable the remote start system by putting the switch in the 'on' position. Connect one wire of the switch to ground and the other wire to the dark blue wire on the EVO-ALL 20-pin plug.
- HOOD PIN:** Safety feature – it prevents accidental remote starting while the hood is open and someone may be working in the engine compartment. Connect to the dark blue wire on the EVO-ALL 20-pin plug.

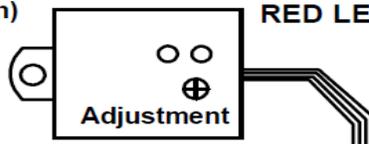
SECURITY:

□ Because security features depend on individual security needs, any additional wire connections needed for security purposes for the installation are considered optional. The EVO-ALL module will communicate to the vehicle's computer, and the alarm, through data, automatically providing basic security, eliminating the need for many traditional wire connections. A detailed list of functions covered by the EVO-ALL for the listed vehicles, can be found below. If all your individual security needs are not automatically covered functions, you will need to make the wire connection from the alarm for the coverage. A detailed list of the wires, and their functions can be found in the installation instruction booklet that comes in the box with your alarm.

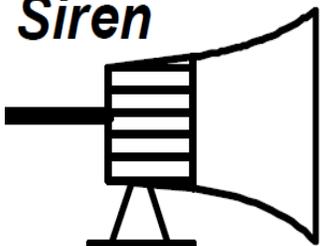
VEHICLE	Vehicle functions supported in this diagram (functional if equipped)														
	Immobilizer bypass	Lock	Unlock	Arm	Disarm	Hatch (open)	Trunk (open)	Sliding Door	Tachometer	Door Status	Trunk Status	Hand-Brake Status	Foot-Brake Status	OEM Remote monitoring	
CHRYSLER															
300-300C	•	•	•	•	•		•		•			•	•	•	
Town & Country	•	•	•	•	•		•	•	•	•	•	•	•	•	
DODGE															
Challenger	•	•	•	•	•		•		•	•	•	•	•	•	
Charger	•	•	•	•	•		•		•			•	•	•	
Durango	•	•	•	•	•	•			•	•	•	•	•	•	
Grand Caravan	•	•	•	•	•	•		•	•	•	•	•	•	•	
Journey	•	•	•	•	•		•		•	•	•	•	•	•	
Magnum	•	•	•	•	•	•		•	•	•	•	•	•	•	
RAM	•	•	•	•	•				•	•		•	•	•	
JEEP															
Commander	•	•	•	•	•	•			•	•	•	•	•	•	
Grand Cherokee	•	•	•	•	•	•			•	•	•	•	•	•	
VOLKSWAGEN															
Routan	•	•	•	•	•		•	•	•	•	•	•	•	•	

SHOCK SENSOR: The sensor supplied with this system does not require any additional wiring. Simply mount the sensor in a suitable location, plug it in, and adjust the sensitivity. There are 2 LED's on the shock sensor to assist you in adjusting sensitivity. The Blue LED indicates the "Warn Away" level and the Red LED indicates a full alarm. NOTE: Your sensor may have 1 or 2 adjustment knobs (depending on model) to adjust both Pre-Warn and alarm trigger.

BLUE LED (Pre-Warn) **RED LED (Trigger)**



Siren

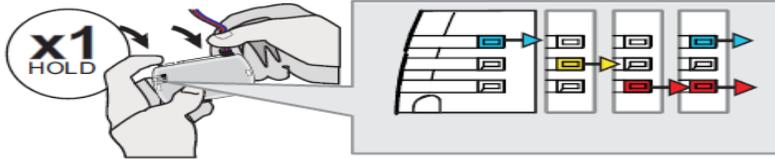


Your SP series alarm comes with a siren. This will typically mount under the hood, either on the firewall, or wheel well. Mount the siren facing at a downward angle to prevent moisture from collecting inside the siren. Connect the black wire to ground, either right to a screw used to mount the siren to metal under hood, or interior of the vehicle along with main system ground. The red wire from the siren will connect to the brown (+) siren output wire, located in the 12-pin plug of the SP alarm. The brown/white horn output wire in the 12-pin plug of the alarm may be connected to the vehicle's (-) horn wire, and used along with the siren or in place of it. If your kit comes with a 2-way remote, then it will provide alarm violation alerts right from your keychain, so you can opt out of audio alerts from the vehicle, by choosing not to install the siren or connecting the horn.

Step 3 – Programming

EVO-ALL programming:

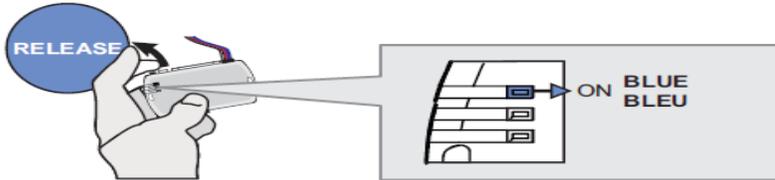
1



Press and hold the programming button: Connect the 4-PIN Data-link harness (Black connector).

↳ The Blue, Red, Yellow and Blue & Red LEDs will alternatively illuminate.

2

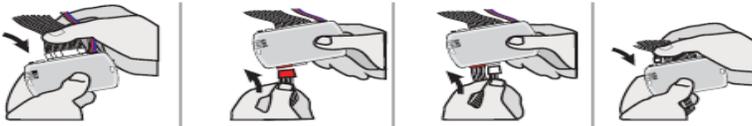


Release the programming button when the LED is BLUE.

If the LED is not solid BLUE disconnect the 4-Pin connector (Data-Link) and go back to step 1

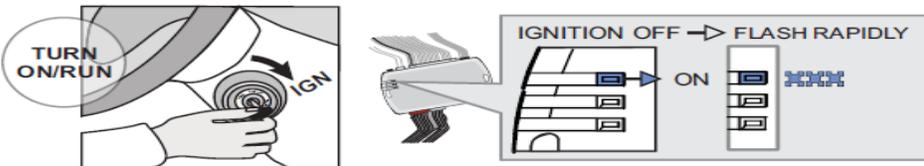


3



Insert the required remaining connectors.

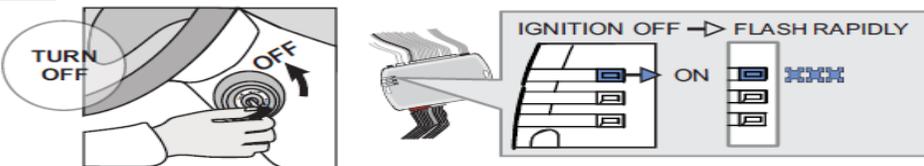
4



Turn the key to the Ignition ON/RUN position.

↳ The BLUE LED will flash rapidly.

5



Turn the key to the OFF position.

↳ The BLUE LED will flash rapidly.

6

With OEM remote



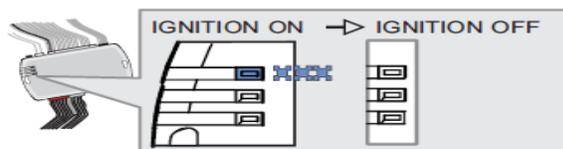
Press the LOCK button on the vehicles OEM remote.

Or

Without OEM remote



Press and release the programming button on the module once.



↳ The BLUE LED will turn off.



The module is now programmed.

Use the remote of the remote starter or security system to test all of the supported features to ensure proper programming.

SP-502 programming:

The **SP-502** requires no programming from default values for 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 below. Use the procedure below to make any desired changes:

1. Turn Ignition Key to the ON position. (Do not start vehicle except when programming tach).
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. Light flash and/or honk after each button press. Press carefully and do not lose count.
4. **For SP-502:** Change option value with corresponding remote button: **#1 Lock, #2 Unlock, #3 Trunk, #4 Start.**
5. When finished, turn Ignition OFF, and check for changed features.

OPTION PROGRAMMING TABLE

Option #	Option Description	TX Button #1	*TX Button #2* (Default Value)	TX Button #3	TX Button #4
1	Engine Monitoring	Learn Tach	*Tachless*		Hybrid Mode
2	Pink/White Wire Selection	(+) ACC 2	(+) *IGN 2*	(+) START 2	
3	Passive Arming	Passive Arm with Lock	*OFF*	Passive Arm without Lock	
4	Active Re-Arm / Auto Re-Arm	Active Re-Arm with Lock	*OFF*	Auto Re-Arm with Lock	Auto Re-Arm without Lock
5	Arm / Disarm thru OEM Remote (data mode only)	ON	*OFF*	ON with 3 Press Lock = Start	
6	Parking Lights on w/Disarm	OFF	*ON*		
7	Data Port Protocol	ADS - OFA Series	*EVO & SL Series*		
8	Remote Start & Trunk Pop Button Press	Double Button Press	*½ Second Press*	Press and Hold 2 seconds	
9	3 Chirps with Remote Start	OFF	*Siren*	Horn	Horn and Siren
10	Disarm with Trunk Pop	OFF	*ON*		
11	Open Door Warning	5 Sec.	*60 Seconds*	15 Seconds	30 Seconds
12	Door Lock Pulse Time	3 Sec.	*0.5 Seconds*	Double Unlock	Wake Up Pulse on Unlock
13	Auto Lock with Ignition	Lock and Unlock	*OFF*	Security Lock with IGN door & Brake	
14	Lock with Remote Start	OFF	*Lock with Remote Start Only*	Lock with Remote Start and Abort	Lock with Abort Only
15	Transmission Type	Manual Transmission set with Remote Control	*Automatic*	Manual Transmission set with Hand Brake	Manual Transmission with auto shut down after door closed
16	Unlock before Remote Start	ON	*OFF*		
17	Blue/Black Wire Function	AUX #2 Momentary	*(-) When Running*		
18	Siren Output	Trigger Only	*Arm / Disarm / Warning / Trigger*	Warning & Trigger	
19	Horn Output	Trigger Only	Warning & Trigger		
20	Horn Chirp Confirmation	1 Press	2 Press		
21	Horn Pulse (Chirp Duration)	15 milliseconds	20 milliseconds	40 milliseconds	
22	Minimum Starter Crank Time	(-) 0.1 Seconds	*0.8 Seconds*	(+) 0.1 Seconds	(+) 0.4 Seconds
23	Diesel Glow Plug Delay	10 Seconds	*Monitor Glow Plug	15 Seconds	20 Seconds
24	Remote Start Engine Run Time	10 Minutes	*20 Minutes*	30 Minutes	5 Minutes
25	Smart Tachless Voltage Adjustment 79-100%	- 1%	*Set to 93% for default*	+ 1%	
26	Idle Down Run Time	10 Minutes	*20 Minutes*	30 Minutes	Infinity Run
27	Aux # 3	Steady Momentary	(-) *ACC*	Timed	Latch On/Off
28	Aux # 3 Time : 1 to 255 sec.	- 1 Second	*12 Seconds*	+ 1 Second	+ 10 Seconds
29	Aux # 4	Steady Momentary	(-) *IGN*	Timed	Latch On/Off
30	Aux # 4 Time : 1 to 255 sec.	- 1 Second	*12 Seconds*	+ 1 Second	+ 10 Seconds
31	Turbo Timer Mode	1 Minute	*OFF*	3 Minutes	5 Minutes
32	PINK Wire function	Passive Carjack	*Glow Plug*		
33	1-Way or 2-Way	2-Way	1-Way		
34	Smart Phone baud rate	9600	115200		
35	Reset Options to default (*)	*Reset Options 1 thru 32*			

TIPS: -If the vehicle OEM alarm is tripped by remote start, program option 10 to “unlock before remote start”.

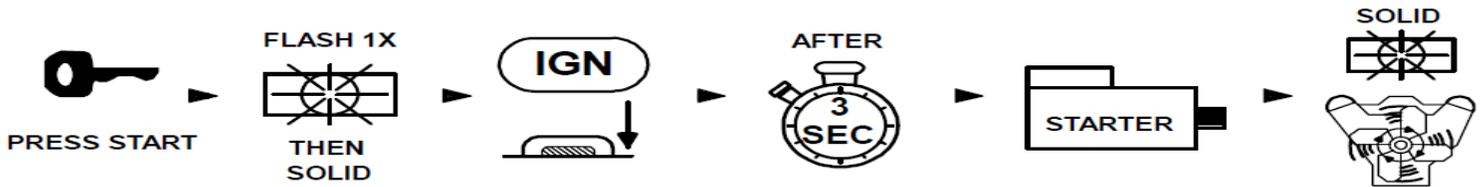
-If vehicle stalls or under-cranks it may be necessary to program tach option 1.

*Tach programming must be done with engine running.

Step 4 – Test the System

Once all your connections are made, you should test the system before putting everything back together:

- Press and hold the “start” button on your **SP-502** remote for 2 seconds (default) to start the vehicle.
 1. The parking lights flash once, return solid, and the ignition/accessory circuits turn on.
 2. After a few seconds the starter motor engages. The parking lights and accessories will turn off while cranking.
 3. Engine starts and runs. Parking lights and accessory circuits turn back on, and the doors lock.
 4. Engine will remain running for the programmed run time or until the brake pedal is pressed. If needed, the engine can be turned off with remote by pressing the start (key) button again.



- Press the ‘lock’ and ‘unlock’ buttons on your remote and confirm that the door locks are operating.
- If you have the power trunk/hatch release option, press and hold the ‘trunk’ button for 3 seconds. The trunk/hatch should open.
- If your tests were unsuccessful, go back and re-check your wiring and programming.
- Once you’ve completed testing the system, it’s time to close it up.

Step 5 – Close it Up!

1. *EVO-ALL 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. *SP-502 unit* – mount along with *EVO-ALL module*
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.
5. *Alarm Shock Sensor* – Connect the shock sensor’s 4-pin plug to the remote start module and mount the shock sensor any firm surface such as the engine firewall or dash supports.

You are going to have lots of wires that you don’t use. After you finish testing the system, you can clean up the installation by cutting the unused wires short and taping off the ends. Don’t cut wires while they’re plugged into the modules – unplug them first. Gather up all of 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! Re-Install any panels that were removed to gain access to key switch in reverse order they were removed. ENJOY!**

REMOTE STARTER FUNCTIONALITY



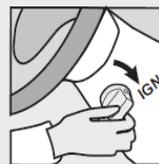
All doors must be closed.



Remote start the vehicle.



Unlock door with remote or key and enter the vehicle.



Insert the key into key switch and turn the key to the on/run position



You may now press the brake to shift into gear and drive the vehicle.