



TIP SHEET

RS7 + KEY-OVERRIDE-ALL(5.b) + SPDT(x2) + DIODE(x2)

T3640

Toyota - 4Runner :	1999-2002	Lexus - GS 400 :	1997-2000
Toyota - Avalon :	2000-2004	Lexus - GS 430 :	2001-2005
Toyota - Camry :	2002-2004	Lexus - IS 300 :	2001-2005
Toyota - Highlander :	2001-2003	Lexus - LS 400 :	1999-2000
Lexus - ES 300 :	2002-2003	Lexus - RX 300 :	1999-2003
Lexus - GS 300 :	1998-2003		

*Regular 40-bit key vehicles only (NOT for 80-bit "G" stamped key)

*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 replace your installation manual. You will still need to refer to that.

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

1. Installing the remote starter
2. Installing the bypass module
3. Test the system & close it up!

Step 1 – Installing the remote starter:

✚ This Tip Sheet will cover what wires need to be connected from the remote start kit and where those wires connect. Any wires on the remote start and bypass module that are not listed, are not required. 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 only the needed wires you need from the remote starter.

- ⊗ In most cases, the wires on the remote start and bypass module 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.

Vehicle wiring chart:

The vehicle wiring charts on the next 3 pages will list the needed wires from the remote starter, and help you locate the wires that you're going to need to connect each wire to in your vehicle. The first column on the left of the chart is the wire from the remote starter that needs to be connected. Find your vehicle in top row. Find the intersecting box where the remote start wire meets the column of your vehicle, to find where to connect the remote starter wire to.

Each wire listed on the 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

	1999-2002 4Runner	2000-2004 Avalon	2002-2004 Camry	2001-2003 Highlander
redx2 constant 12v @6pin	WHITE (+) OR WHITE/RED (+) @ ignition switch, white 8 pin plug, pin 7	WHITE/BLUE (+) @ ignition switch, white 8 pin plug, pin 2	WHITE/RED (+) (12 Gauge) @ ignition switch, white 8 pin plug, pin 7	WHITE, OR BLUE/YELLOW (+) @ ignition switch, white 6 pin plug, pin 5
pink ignition @6pin	BLACK/YELLOW (+) @ ignition switch, white 8 pin plug, pin 4	BLACK/ORANGE (+) @ ignition switch, white 8 pin plug, pin 6	BLACK/RED (+) (14 Gauge) @ ignition switch, white 8 pin plug, pin 6	BLACK (+) @ ignition switch, white 6 pin plug, pin 6
pink/white ignition #2 @6pin	BLACK/RED (+) @ ignition switch, white 8 pin plug, pin 6	WHITE/RED (+) @ ignition switch, white 8 pin plug, pin 4	BLACK/YELLOW (+) (20 Gauge) @ ignition switch, white 8 pin plug, pin 4	BLACK/YELLOW (+) @ ignition switch, white 6 pin plug, pin 2
gray accessory @6pin	BLUE/RED (+) @ ignition switch, white 8 pin plug, pin 3	WHITE/GREEN (+) @ ignition switch, white 8 pin plug, pin 3	BLUE/RED (+) (18 Gauge) @ ignition switch, white 8 pin plug, pin 3	PINK (+) @ ignition switch, white 6 pin plug, pin 3
brown starter @6pin	GREEN/BLACK (+) or BLACK (+) @ ignition switch, white 8 pin plug, pin 8	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 8	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 8	BLACK/WHITE (+) @ ignition switch, white 6 pin plug, pin 4
blue/orange starter #2 @red 3pin	N/A	N/A	BLACK/YELLOW (+) (20 Gauge) @ ignition switch, white 8 pin plug, pin 1 (RELAY REQUIRED) *SEE DIAGRAM	N/A
black ground @12pin	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle
purple brake @12pin	GREEN/WHITE (+) @ SWITCH ABOVE BRAKE PEDAL	RED/BLUE (+) or GREEN/WHITE (+) @ SWITCH ABOVE BRAKE	GREEN/WHITE (+) @ SWITCH ABOVE BRAKE PEDAL	GREEN/WHITE (+) @ BRAKE SWITCH ABOVE PEDAL
gray hood @12pin	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit
yellow/black GWR @12pin	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All
red/black park light select @12pin	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to solid metal surface of vehicle (-) (GROUND)	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.
white park light out @12pin	green (+) driver kick, harness to rear	PINK (-) ONLY! @ STEERING COLUMN HARNESS or BCM	GREEN (+) @ dash fuse box, white 20 pin plug (2K), pin 19	GREEN (+) @ driver kick, white 12 pin plug, pin 1
green lock @3pin	BROWN/WHITE (-) @ PLUG BELOW FUSEBOX TEST WHILE TURNING KEY IN PASSENGER DOOR.	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	BLUE/YELLOW (-) IN DRIVERS KICK PANEL, HARNESS from DOOR, WHITE Plug TEST WHILE TURNING KEY IN DRIVERS DOOR	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
blue unlock/disarm @3pin	GREEN/YELLOW and BLUE/YELLOW (-) Use both, @ PLUG BELOW FUSEBOX (2 diodes required) TEST WHILE TURNING KEY IN PASSENGER DOOR.	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	BLUE (-) IN DRIVERS KICK PANEL, HARNESS from DOOR, WHITE Plug. TEST WHILE TURNING KEY IN DRIVERS DOOR. (REQUIRES DOUBLE PULSE)	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
brown trunk pop @12pin	(locks/unlocks along with doors)	BLUE (-) @ TRUNK RELEASE SWITCH (ONLY WORKS IF MAIN SWITCH IS NOT TURNED ON)	WHITE/BLUE (5-Wire) (requires relay) @ DRIVERS KICK PANEL (See DIAGRAM)	(locks/unlocks along with doors)

	2002-2003 ES 300	1998-2005 GS 300	1997-2000 GS 400	2001-2005 GS 430
redx2 constant 12v @6pin	WHITE/RED (+) (12 Gauge) @ ignition switch, white 8 pin plug, pin 7	WHITE/BLUE (+) @ ignition switch, white 8 pin plug, pin 2	WHITE/BLUE (+) @ ignition switch, white 8 pin plug, pin 2	WHITE/BLUE (+) @ ignition switch, white 8 pin plug, pin 2
pink ignition @6pin	BLACK/RED (+) (14 Gauge) @ ignition switch, white 8 pin plug, pin 6	BLACK/YELLOW (+) @ ignition switch, white 8 pin plug, pin 4	BLACK/YELLOW (+) @ ignition switch, white 8 pin plug, pin 4	BLACK/YELLOW (+) @ ignition switch, white 8 pin plug, pin 4
pink/white ignition #2 @6pin	BLACK/YELLOW (+) (20 Gauge) @ ignition switch, white 8 pin plug, pin 4	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 6	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 6	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 6
gray accessory @6pin	BLUE/RED (+) (18 Gauge) @ ignition switch, white 8 pin plug, pin 3	BLUE/YELLOW (+) ignition switch, white 8 pin plug, pin 3	BLUE/YELLOW (+) ignition switch, white 8 pin plug, pin 3	BLUE/YELLOW (+) ignition switch, white 8 pin plug, pin 3
brown starter @6pin	BLACK/WHITE (+) @ ignition switch, white 8 pin plug, pin 8	BLACK (+) @ ignition switch, white 8 pin plug, pin 8	BLACK (+) @ ignition switch, white 8 pin plug, pin 8	BLACK (+) @ ignition switch, white 8 pin plug, pin 8
blue/orange starter #2 @red 3pin	GREEN/YELLOW (+) (20 Gauge) @ ignition switch, white 8 pin plug, pin 1 (RELAY REQUIRED) *SEE DIAGAM	N/A	N/A	N/A
black ground @12pin	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle
purple brake @12pin	GREEN/WHITE (+) @ SWITCH ABOVE BRAKE PEDAL	GREEN/WHITE (+) @ 20- PIN PLUG IN DRIVERS KICK PANEL	GREEN/WHITE (+) @ 20- PIN PLUG, IN DRIVERS KICK PANEL	GREEN/WHITE (+) @ 20- PIN PLUG, IN DRIVERS KICK PANEL
gray hood @12pin	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit
yellow/black GWR @12pin	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All
red/black park light select @12pin	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.
white park light out @12pin	GREEN (+) @ dash fuse box, white 20 pin plug (2K), pin 19	GREEN (+) @ driver kick fuse box, white 11 pin plug, pin 11	GREEN (+) @ driver kick fuse box, white 11 pin plug, pin 11	GREEN (+) @ driver kick fuse box, white 11 pin plug, pin 11
green lock @3pin	BLUE/YELLOW (-) IN DRIVERS KICK PANEL, HARNESS from DOOR, WHITE Plug TEST WHILE TURNING KEY IN DRIVERS DOOR	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
blue unlock/disarm @3pin	BLUE (-) IN DRIVERS KICK PANEL, HARNESS from DOOR, WHITE Plug. TEST WHILE TURNING KEY IN DRIVERS DOOR. (REQUIRES DOUBLE PULSE)	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
brown trunk pop @12pin	WHITE/BLUE (5-Wire) (requires relay) @ DRIVERS KICK PANEL (See DAIGRAM)	BLUE (+) @ 18 PIN PLUG IN DRIVERS KICK PANEL (Requires Relay)	BLUE (+) @ 18-PIN PLUG IN DRIVERS KICK PANEL (Requires Relay)	BLUE (+) @ 18-PIN PLUG IN DRIVERS KICK PANEL (Requires Relay)

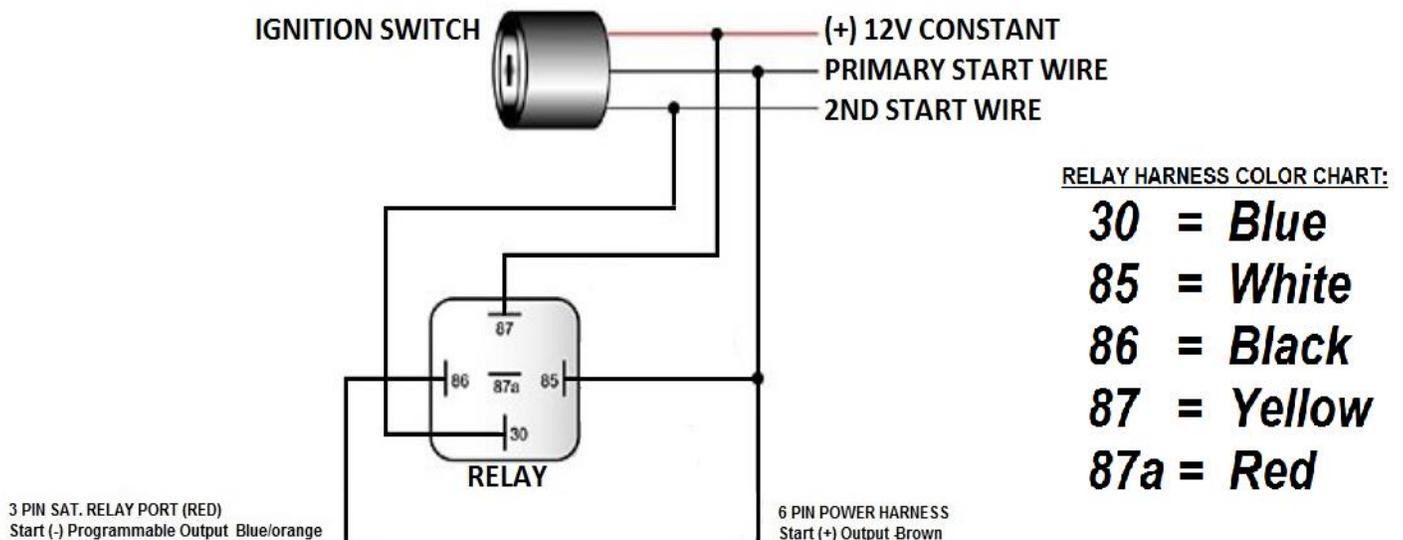
	2001-2005 IS 300	1999-2000 LS 400	1999-2003 RX 300
redx2 constant 12v @6pin	WHITE (+) OR WHITE/RED (+) @ IGNITION SWITCH HARNESS	BLACK/WHITE (+) OR WHITE/BLUE (+) @ IGNITION SWITCH HARNESS	WHITE/BLUE (+) @ IGNITION SWITCH HARNESS
pink ignition @6pin	BLACK/RED (+) @ IGNITION SWITCH HARNESS	WHITE (+) @ IGNITION SWITCH HARNESS	BLACK/YELLOW (+) @ IGNITION SWITCH HARNESS
pink/white ignition #2 @6pin	BLUE/RED (+) @ IGNITION SWITCH HARNESS	BLACK (+) @ IGNITION SWITCH HARNESS	BLACK (+) @ IGNITION SWITCH HARNESS
gray accessory @6pin	RED (+) @ IGNITION SWITCH HARNESS	WHITE/GREEN (+) @ IGNITION SWITCH HARNESS	PINK (+) @ IGNITION SWITCH HARNESS
brown starter @6pin	BLACK/WHITE (+) @ IGNITION SWITCH HARNESS	BLACK/RED (+) @ IGNITION SWITCH HARNESS	BLACK/WHITE (+) @ IGNITION SWITCH HARNESS
blue/orange starter #2 @red 3pin plug *SEE NOTES	N/A	N/A	N/A
black ground @12pin	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle	Connect to solid metal surface of vehicle
purple brake @12pin	GREEN/WHITE (+) @ SWITCH ABOVE BRAKE PEDAL	GREEN/WHITE (+) IN DRIVERS KICK PANEL	GREEN/WHITE (+) @ SWITCH ABOVE BRAKE PEDAL
gray hood @12pin	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit	Connect to hood pin supplied with kit
yellow/black GWR @12pin	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All	Connect to BLUE (-) While Running wire in 6-pin plug of Key Override All
red/black park light select @12pin	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.	Connect to (+) constant 12v. Along with red wire in 6-pin plug of remote starter.
white park light out @12pin	GREEN/BLACK (+) @ R side of driver's fuse box, 13 pin plug	GREEN/ORANGE (+) @ fuse box, in a 3 pin plug	GREEN (+) @ driver kick, gray 12 pin plug, pin 10
green lock @3pin	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
blue unlock/disarm @3pin	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM	SEE TOYOTA/LEXUS DOOR LOCK INTERFACE DIAGRAM
brown trunk pop @12pin	BLUE/WHITE (5 WIRE)@ BODY ECU, TOP OF FUSEBOX (Requires Relay) (See DAIGRAM)	ORANGE (-) @ TRUNK RELEASE SWITCH	(locks/unlocks along with doors)

NOTES:

- **1) Parking lights:** 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 its polarity using the red/black wire, connect the white wire to the parking light wire in your vehicle, as indicated on your wiring chart.
- **2) Hood Pin:** The grey wire in the 12-pin plug 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!
- **3) Relay @ Diodes:** The vehicles listed in this tip sheet require connection of additional parts for either the door locks or second starter wire of the vehicle. We have included a relay, relay harness, and 2 diodes with your kit for these purposes. The pins of the relay are identifiable by the pin numbers, but the harness wires are also color coded. The diodes are directional, so pay attention to what direction the stripe faces when installing. Refer to corresponding diagram for connection.

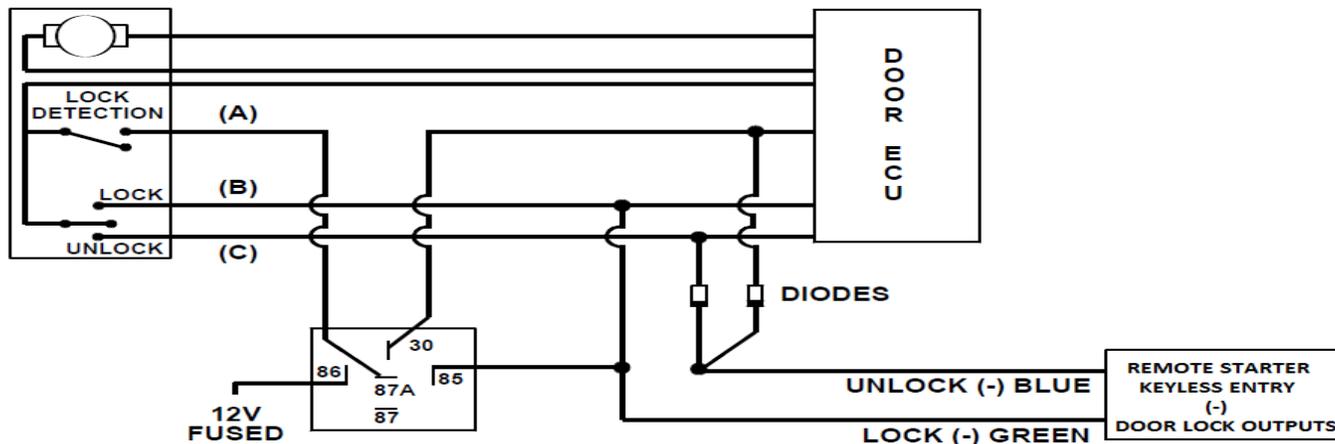
TOYOTA SECOND STARTER:

- Some Toyota vehicles have two starter wires that need to be powered during the remote start sequence. A relay has been included with your kit for this purpose. If the wire chart lists a second starter wire, then you will need to connect the relay, as follows:



TOYOTA AND LEXUS DOOR LOCKS

Installing an aftermarket security or keyless entry system in Toyota and Lexus vehicles requires the door lock interface to take place in the driver or passenger door.



NOTE: To unlock all the doors with a single pulse this interface must be wired in the passenger door. To have progressive unlocking, or if using a unit with double pulse unlock, this interface may be wired in the driver door. The Toyota Avalon, however, will not work with the double pulse. The charts below show the corresponding wires.

CAR	DRIVER DOOR			PASSENGER DOOR		
	A	B	C	A	B	C
98-up GS 300/400	Gray	Pnk/Blk	Pnk/Grn	Green	Pnk/Blk	Pnk/Grn
98-up RX 300	Gray	Pink	Pnk/Blu	Gray	Pink	Pnk/Blu
99-00 LS 400	Gray	Grn/Org	Green	Gray	Grn/Org	Green
01-up IS 300	Blu/Blk	Grn/Red	Grn/Blk	none	none	none
00-up Avalon	Lt. Green	Blu/Wht	Blue	Yellow	Blu/Wht	Blu/Yel
01-up Sequoia	Red/Yel	Lt. Grn/Blk	Lt. Grn/Red	Red/Yel	Lt. Grn/Blk	Lt. Grn/Red
04-up Tundra Double Cab	Red/Yel	Lt. Grn/Blk	Lt. Grn/Red	Red/Yel	Lt. Grn/Blk	Lt. Grn/Red
01-03 Highlander	Green	Pink	Pnk/Blu	*1(Gray	Blu/Wht	Lt. Green)
04-up Highlander	Brown	Green	Yellow	**2Brown	Purple	Blue

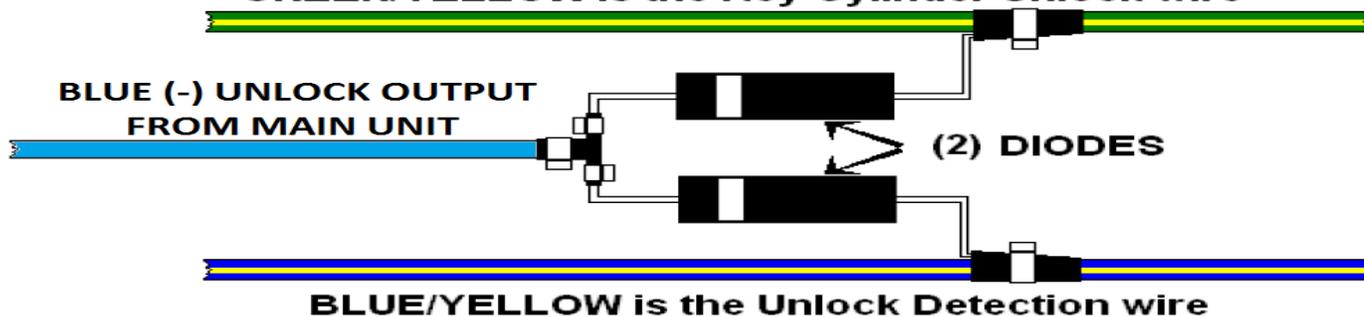
*1. These wires can be found in their respective kick panel, no need to go into the door.

**2. The passenger side wires are at the BECU behind the glove box, 2nd plug down from the top. They are: lock - PURPLE in pin 8, unlock - LIGHT BLUE in pin 13, and lock detection - BROWN in pin 11.

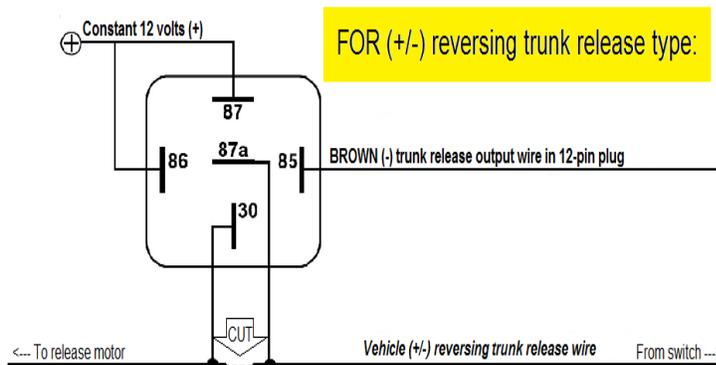
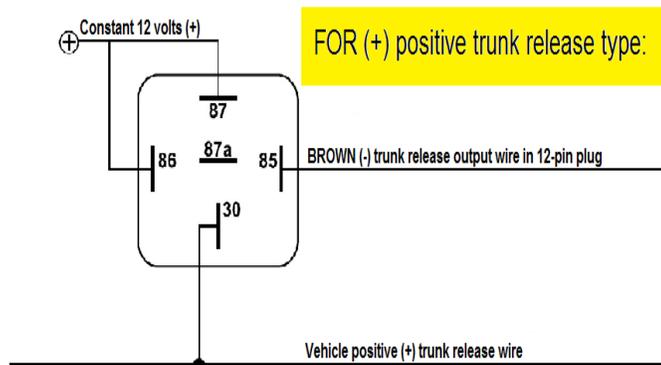
TOYOTA 4-RUNNER Door Unlock Diagram:

1998-2002

GREEN/YELLOW is the Key Cylinder Unlock wire



*** These wires are located in a Plug below the Fuse Box. ***



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

-Before proceeding, plug the antenna, programming button, and LED into the remote start. For tips on where to install these, see Installer's Tip #1 .

RS7 remote starter programming:

Once you have successfully made your connections, you will need to change two options in the RS7 programming menu for proper operation. We will be showing you what options need to be changed, what they need to be changed to, and how to make the changes:

OPTIONS TO CHANGE:

Option #3: Door Lock Pulse – change to value 3 “double unlock”. Not needed for all vehicles, check vehicle wire chart to see if your vehicle requires a double pulse unlock. Unlock is required to disarm factory alarm.

Option #10: Unlock before remote start (to disarm OEM alarm) – change to value 1 “ON”. This will unlock the doors of the vehicle before remote start to disarm factory alarm. The doors will automatically re-lock after remote start to keep the vehicle secure.

- **Use the procedure below to make any programming option changes using your vehicles key, the valet programming button that plugs into the RS7, and the remotes that come with the RS4.**

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. The unit will also click 5 times.
3. Push the valet program button the number of times that corresponds to the option number desired. You must get a light flash and/or honk and/or click from unit after each button press. If the system did not flash the lights and/or honk and/or click, then it did not register your press. Press carefully and do not lose count.
4. **For RS7:** When you reach the desired option #, to change the option: Press button #1 **Lock**, #2 **Unlock**, #3 **Trunk**, #4 **Start**.
5. When finished, turn Ignition OFF, and check for changed features.

- 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:
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OPTION PROGRAMMING TABLE

Option #	Option Description	TX Button #1 (Lock)	TX Button #2 (Unlock) <i>Default Value</i>	TX Button #3 (Trunk)	TX Button #4 (Start)
1	Engine Monitoring	Tach	<i>*Tachless*</i>		Hybrid
2	Autolock with RPM / Ignition	ON	<i>*OFF*</i>		
3	Door Lock Pulse	3 Seconds	<i>*0.50 Seconds*</i>	Double Unlock	"Wake Up" pulse with Unlock
4	14 Ga. Pink/white Wire Selection	ACC	<i>*IGN*</i>	START	
5	Data Port Protocol	ADS iDataLink - OFA Series	<i>*Fortin - EVO / SL Series*</i>		
6	Remote Start Button Selection	Double Button Press	<i>*½ Second Press*</i>	Press 2 seconds & release	
7	Horn Chirps on Remote Start	ON	<i>*OFF*</i>		
8	Lock with Remote Start / Abort	OFF	<i>*Lock after Remote Start*</i>	Lock after Remote Start and Arm OEM Alarm with Abort	Lock / Arm OEM Alarm with Abort
9	Brown wire function	Dome Light	<i>*Trunk pop*</i>	Double Press Trunk	Press and Hold 2 seconds
10	Unlock before Remote Start (to Disarm OEM Alarm)	ON	<i>*OFF*</i>		
11	Transmission Type	Manual Transmission with Remote Control	<i>*OFF*</i>	Manual Transmission set with Hand Brake	Manual Transmission with auto shut down after door closed
12	Idle Down Timer	10 Minutes	<i>*20 Minutes*</i>	30 Minutes	Infinity Run
13	Horn Chirp Confirmation	1 Press	<i>*2 Press*</i>		
14	Unlock with Trunk Pop	Unlock/Trunk Pop	<i>*Trunk Pop only*</i>		
15	30 Sec. Park Lights with Unlock	OFF	<i>*ON*</i>		
16	Horn Pulse (Chirp)	15 milliseconds	<i>*20 milliseconds*</i>	40 milliseconds	
17	OEM Interface Green input wire (RS-00) thru wire & data	3 pulse = Remote Start with OEM Remote	<i>*1 Pulse*</i>		
18	Minimum Starter Cranking Time	(-) 0.1 Seconds	<i>*0.8 Seconds*</i>	(+) 0.1 Seconds	(+) 0.4 Seconds
19	Diesel Glow Plug Delay	10 Seconds	<i>*Monitor Glow Plug*</i>	15 Seconds	20 Seconds
20	Remote Start Engine Run Time	10 Minutes	<i>*20 Minutes*</i>	30 Minutes	5 Minutes
21	Smart Tachless Voltage Adjustment 79-100%	-1%	<i>*Set to 93% default*</i>	+1%	
22	Turbo Timer Mode	1 Minute	<i>*OFF*</i>	3 Minutes	5 Minutes
23	Unlock on Start Button after Remote Start (for 1 button remote)	Momentary press = Unlock 2 Sec. press = Abort Start	<i>*OFF*</i>		
24	Orange/white wire Selection	IGN	<i>*ACC*</i>	AUX 2	
25	Orange Wire Selection	AUX 2	<i>*OEM Arm*</i>		
26	14 Ga. Gray Wire Selection	IGN	<i>*ACC*</i>	START	
27	Remote Valet Mode Selection (Valet Pushbutton unaffected)	OFF	<i>*4 Second Press*</i>	Double Press	
28	1-Way or 2-Way System	2-Way (FM only)	1-Way (AM only)		
29	1 or 2 VEH Mode	2 VEH Mode AM and FM systems	1 VEH Mode AM only	In 1 VEH Mode, the Red and Blue LED on Remote Control operate the same vehicle	
30	Smart Phone baud rate	9600 (MS-3)	115200		
31	Reset Options to Default (*)	<i>Reset Options 1 thru 27 (2 Flashes)</i>			

Step 2 – Installing the Key-Override-All bypass module:

The following table shows you what wires from the KOALL bypass module need to be connected, and what they connect to. Any wires NOT listed in the table are NOT USED. Important: **DO NOT** use tap connectors on the data wires. Either wire wrap or solder and tape connections. There are 2 wires in the vehicle that need to be cut in half (DATA and CLK), leaving you with a “key switch side” and a “vehicle side” to each cut. Connections need to be made from the KOALL to each side of each cut vehicle wire. There will also be 2 tap on style connections made to the vehicle key switch for SYNCHRO and KEYSENSE. There will be a ground when running wire connection that needs to be made from the KOALL module to the remote starter, as well as the 4-pin data link connector which will plug into each unit’s data port.

KOALL Wire:		Connect to:
6-pin plug		
Blue		yellow/black “GWR” wire in the remote start’s 12-pin harness
Green		Vehicle key sense wire. This will exit the ignition barrel from a separate location from the pats plug or the main ignition harness. This wire will show ground when the key is inserted into the key switch. (Refer to KOALL5 wire chart)
Yellow		Vehicle Synchro wire. (Refer to KOALL5 wire chart)
Purple/White		“vehicle side” of cut DATA wire in vehicle. This will connect along with the Pink wire in the white 4-pin plug of KOALL. (Refer to KOALL5 wire chart)
Yellow/Black		“vehicle side” of cut CLK wire in vehicle. This will connect along with the Pink wire in the white 4-pin plug of KOALL. (Refer to KOALL5 wire chart)
White 4-pin plug		
Pink		“vehicle side” of cut DATA wire in vehicle. This will connect along with the Purple/White wire in the white 6-pin plug of KOALL. (Refer to KOALL5 wire chart)
White		“vehicle side” of cut CLK wire in vehicle. This will connect along with the Yellow/Black wire in the white 6-pin plug of KOALL. (Refer to KOALL5 wire chart)
Pink/Black		“key switch side” of cut DATA wire in vehicle. (Refer to KOALL5 wire chart)
White/Black		“key switch side” of cut CLK wire in vehicle. (Refer to KOALL5 wire chart)
Black 4-pin plug (data link)		4-pin data port of remote starter (plugs in)

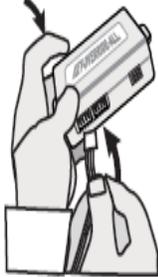
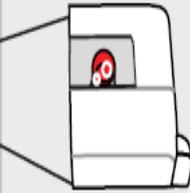
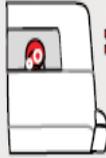
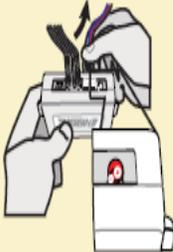
KOALL5 wire chart:

The following chart shows the vehicle wire colors that the Key-Override-All will need to connect to. The section on the left displays Lexus, while the right section displays Toyota vehicles. Find your vehicle model and year in the first two columns of the section, and use the four columns to the right to identify the CLK, DATA, SYNCHRO, and KEY SENSE wire in your vehicle:

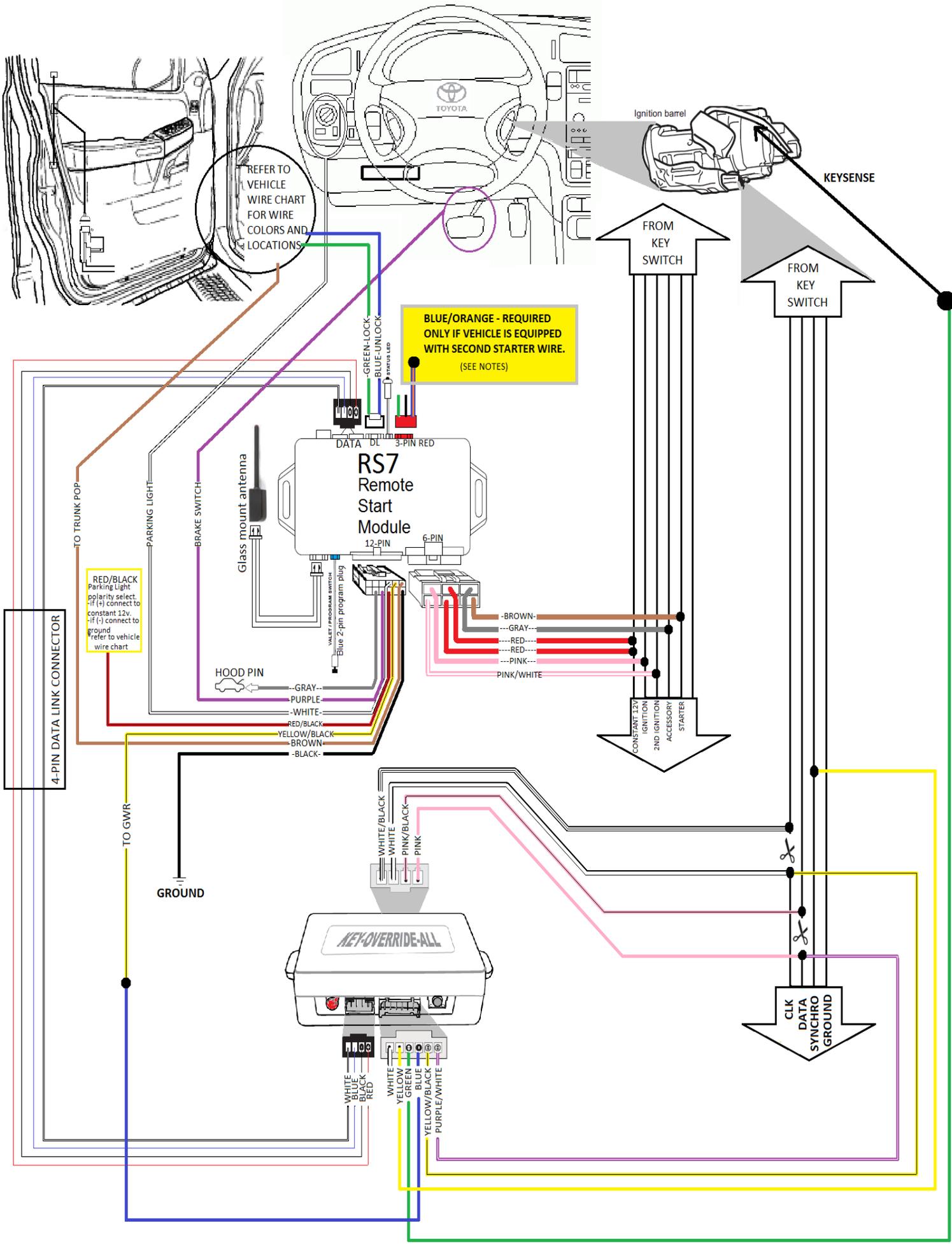
LEXUS	YEARS	CLK	DATA	Synchro	Key Sense	TOYOTA	YEARS	CLK	DATA	Synchro	Key Sense
ES 300	98-01	Red/Blue	Green/White	Blue/Yellow	Blue/Black	4Runner	99-02	Red/Black	Gray/Red	Pink/Black	Yellow/Red
	02-03	Red/Blue	Green/White	Blue/Yellow	Blue	Avalon	98-99	Yellow	Black/Red	Green	Red/Yellow
GS 300	98-05	Black/White	Green/Black	Blue/Red	Yellow		00-04	Blue/Orange	Pink/Green	Blue/Yellow	Red/White
GS 400	98-00	Black/White	Green/Black	Blue/Red	Yellow	Camry	96-00	Red/Blue	Green/White	Blue/Yellow	Blue/Black
GS 430	01-05	Black/White	Green/Black	Blue/Red	Yellow		01	Red/Blue	Green/White	Blue/Yellow	Blue/Black
IS300	01	Purple	Green	Pink	Black/Yellow		02-04*	Red/Blue	Green/White	Blue/Yellow	Blue
	02-05	Purple	Green/Black	Pink/Black	Black/Yellow	*Camry 2003 - 2004 - 4 Cylinder Engines Only					
LS 400	98-00	Red/Black	Red/White	Red	Yellow	Highlander	99-03	Pink	Gray/Blue	Gray	Blue
LX 470	98-02	Purple/Green	Blue/Black	Red/Yellow	Red/White	Land Cruiser	98-10	Purple/Green	Blue/Black	Red/Yellow	Red/Black
RX 300	99	Black	Purple	Gray	Blue	MR2 Spider	03-05	Yellow	Yellow/Green	Yellow/Black	Blue/Red
	00-03	Pink	Purple	Gray	Blue	RAV4	01-03	Yellow	Yellow/Green	Yellow/Black	Blue/Red
SC300	99-00	Blue	Black/Orange	Green/Orange	Yellow	Sienna	99-03	Brown/Red	Brown/White	Brown/Yellow	Blue/Black
SC400	99-00	Blue	Black/Orange	Green/Orange	Yellow	Solara	99-03	Red/Blue	Green/White	Blue/Yellow	Blue/Black

Program the Bypass:

Once all wiring is complete, you will need to program the Key-Override-All bypass module using one of your vehicle's keys. To begin the programming procedure, all of the plugs that connect to the Key-Override-All will need to be unplugged. Then perform the following steps:

PROGRAM. 3					TOYOTA / LEXUS	
1						
						
Press and hold the programming button:	Insert connector 2. (6-pin)	Insert connector 3. (4-pin - if required)	Insert the 4-pin (Data-Link) connector.	The RED LED will turn ON.	Release the programming button.	
2						
						
Insert one functional key in to the ignition barrel. Do not turn the key.	The RED LED will flash ten (10x) times.	If the LED is solid RED disconnect the 4-pin connector (Data-Link) and go back to step 1.	The module is now programmed.			

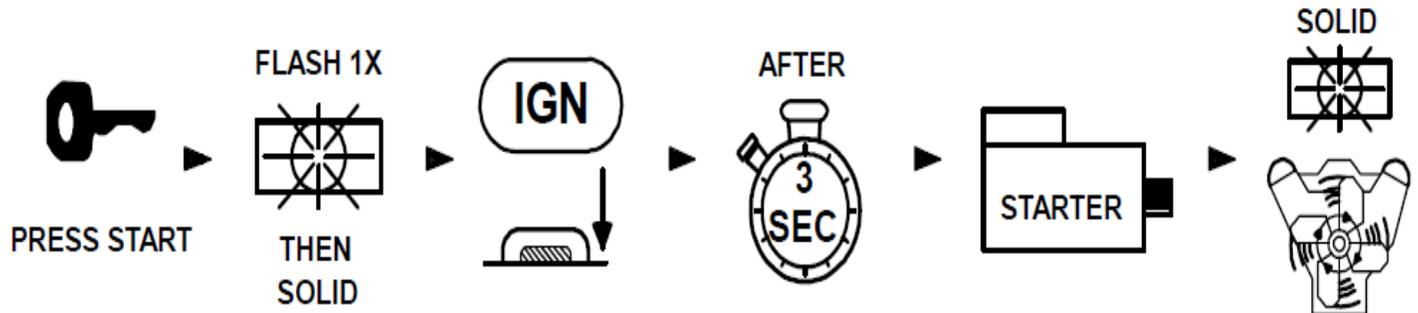
The diagram on the following page will illustrate all of your needed connections. As always, it is the responsibility of the installer to verify all vehicle wiring with a meter prior to making any connections:



Step 3 – test the system and Button it up!

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

- Press and hold the “start” button on your remote for 2 seconds 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 properly.
- If you have the trunk/hatch release feature connected, press and hold the ‘trunk’ button for 3 seconds. The trunk should open and the doors should unlock.
- 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.

-After confirming that everything works properly, cap off or tape the ends of any wires you’re not using to avoid grounding or other contact. Now gather up all the wiring and neatly bundle it together using zip ties or electrical tape to prevent the wires from interfering with any of the moving parts under the dash. Find a secure place to put the remote start module and use zip ties to secure it. Replace any interior vehicle panels that were removed to gain access to the needed wires, in reverse order that they were removed.

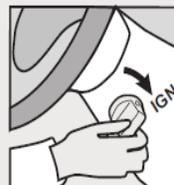
REMOTE STARTER FUNCTIONNALITY



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.

Installer's Tips:

Tip #1 – Where Everything Goes

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.
5. *Status LED* – Not required for normal operation but can be helpful for troubleshooting. Can be mounted anywhere you like – or unplugged and not used once the installation is completed.
6. *relay* – can be stowed along with the remote start.

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.

Using T-Taps

Use a pair of pliers to attach the quick-connects to the wires in your car. Hold the quick connect as shown below in Figure 1, then clamp it on to the wire as shown in Figure 2. There is a locking tab at the front of the connector (Figure 3) – make sure it is secure and locked in place when you are done.



Figure 1



Figure 2

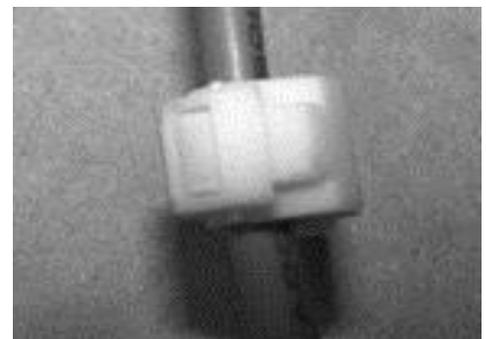


Figure 3