



Update Alert: Firmware updates are posted on the web on a regular basis. We recommend that you check for firmware and/or install guide updates prior to installing this product.

Installation Guide



This guide supports the installation of a DBALL in Remote Start Ready (RSR) mode with or without a Plug & Play (CHTHD1 or CHTHD2) T-Harness (Optional). This solution offers two (2) configuration options to control your system: RF Kit or SmartStart (both sold separately).



Remote Start Ready (RSR) is a function that enables the interface module to remote start the vehicle completely on its own. Consequently, there is no need for an aftermarket or an OEM remote starter in order to start the vehicle from a distance.



Important!

This product is NOT compatible with vehicles equipped with a manual transmission.

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SmartStart Compatible

SmartStart is equipped with D2D, which means it can be connected to an interface module and used in Remote Start Ready (RSR) mode without the use of a remote starter. See the **Module Programming** section for more information.

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Vehicle Application Guide

The following table lists the vehicles and features which are compatible with this product. The number assigned to each year allows you to determine which installation type should be used for your vehicle.

Vehicles	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	PK-Immobilizer Bypass-Data No Key Req'd	AV-Parking Lights Control	CC-Heated Seats Activation	DL-Arm Factory Security	DL-Disarm Factory Security	DL-Door Lock Control	DL-Door Unlock	DL-Driver Priority Unlock	DL-Sliding Door Control Driver	DL-Sliding Door Control Passenger	DL-Trunk / Hatch Release	RS-RAP Shut Down (Retained ACC Power)	RS-Remote Start Ready	RS-SmartStart	RS-Tach / RPM Output	SS-Entry Monitoring ALL Door Pins	SS-Entry Monitoring Driver Door Pin	SS-Entry Monitoring Trunk/Hatch Pin	ST-Brake Status (foot brake)	
Chrysler																															
200		3	3	3	3							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
300/300c						2	2	2				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
300/300c								4	4	4	4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Aspen						3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PT Cruiser					4	4	4	4	4	4		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sebring						3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sebring Convertible						3	3	3				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sebring Sedan						3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Town & Country	1	1	1	1	1	1	1	1	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dodge/Ram																															
1500				1	1							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2500				1	1							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3500				1	1							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Avenger		3	3	3	3	3	3	3				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CVT	1	1	1	1	1							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Caliber				3	3	3	3	3	3 or 4*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Caravan						1	1	1				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Challenger				1	1	1	1	1	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Challenger (Smart Key)				1	1	1	1	1	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Charger						2	2	2				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Charger								4	4			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dakota					3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Durango				1	1	1						*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Durango							3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Grand Caravan	1	1	1	1	1	1	1	1	1			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Journey						1	1					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Magnum								2				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Magnum								4	4	4		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nitro					3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RAM						1	1					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RAM							3	3	3 or 4*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Jeep																															
Commander						2	2	2	4	4		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Compass	3	3	3	3	3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Grand Cherokee						1	1	1				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Grand Cherokee						2	2	2				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Grand Cherokee								4	4	4		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Grand Cherokee (Smart Key)				1	1	1						*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Liberty					3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Patriot	3	3	3	3	3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wrangler	3	3	3	3	3	3	3	3	3			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Mitsubishi																															
Raider						3	3	3				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Volkswagen																															
Routan			1	1	1	1	1					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

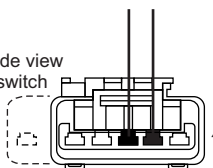
Legend:

- AV: Horn & Lights Controls
- CC: Comfort & Convenience Controls
- DL: OE Door Lock & Alarm Control
- RS: Remote Start & Engine Controls
- SS: Integrated Security & Monitoring
- ST: Function/Feature Status

* To select the proper installation between types 3 and 4, locate the ignition switch connector and select your install type as illustrated below:

Connector side view at ignition switch

5 or 6

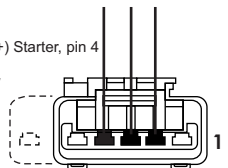


Type 3 vehicles do not have a (+) Starter wire at the ignition switch.

Connector side view at ignition switch

(+) Starter, pin 4

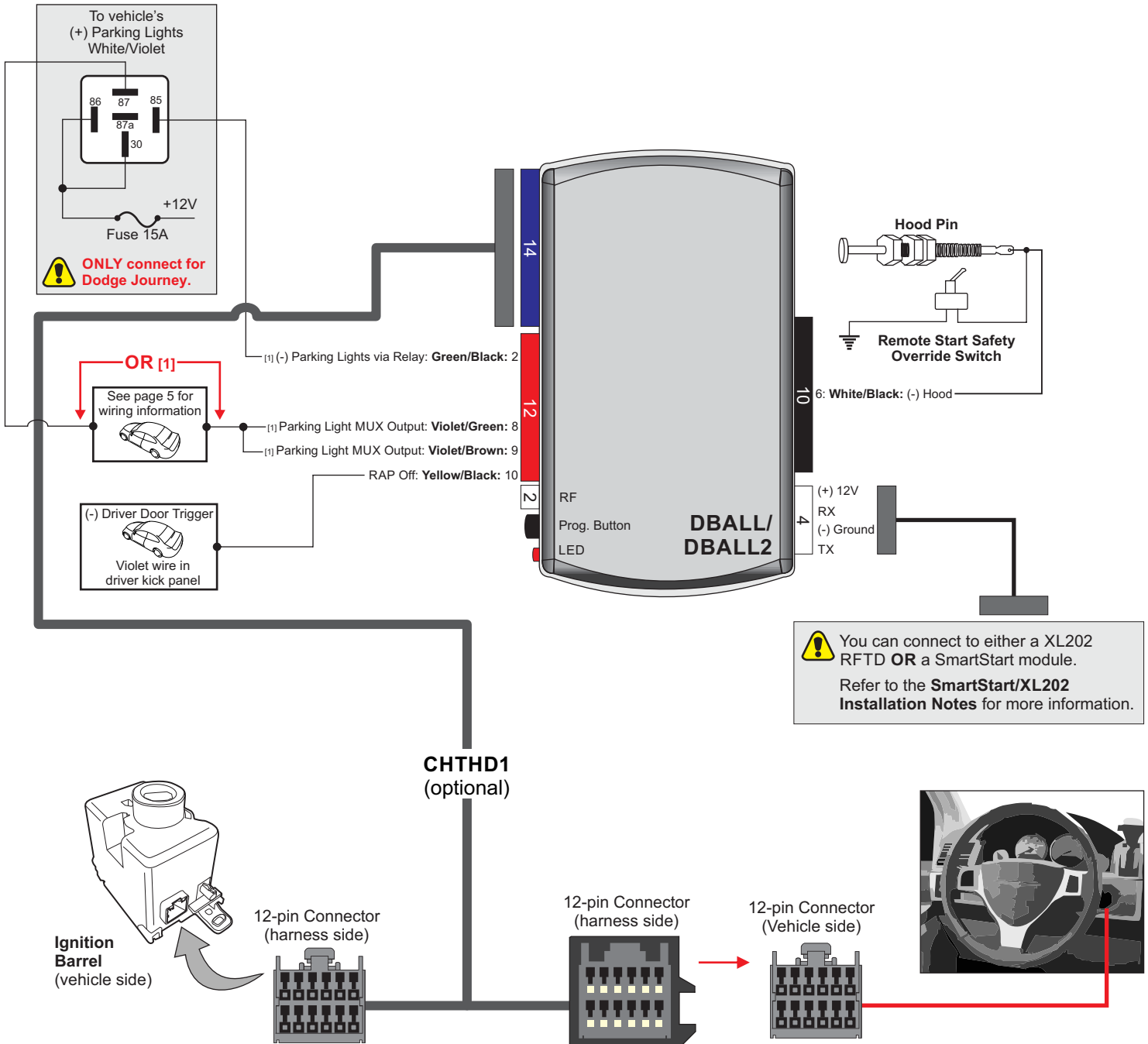
5 or 6



Type 4 vehicles have a (+) Starter wire at pin 4 of the ignition switch.

Installation Type 1a (with CHTHD1 T-Harness)

Important! The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.



[1] See Parking Lights wiring reference chart for the appropriate Parking Lights configuration.

⚠ Wires not listed in this diagram are not required for the installation.

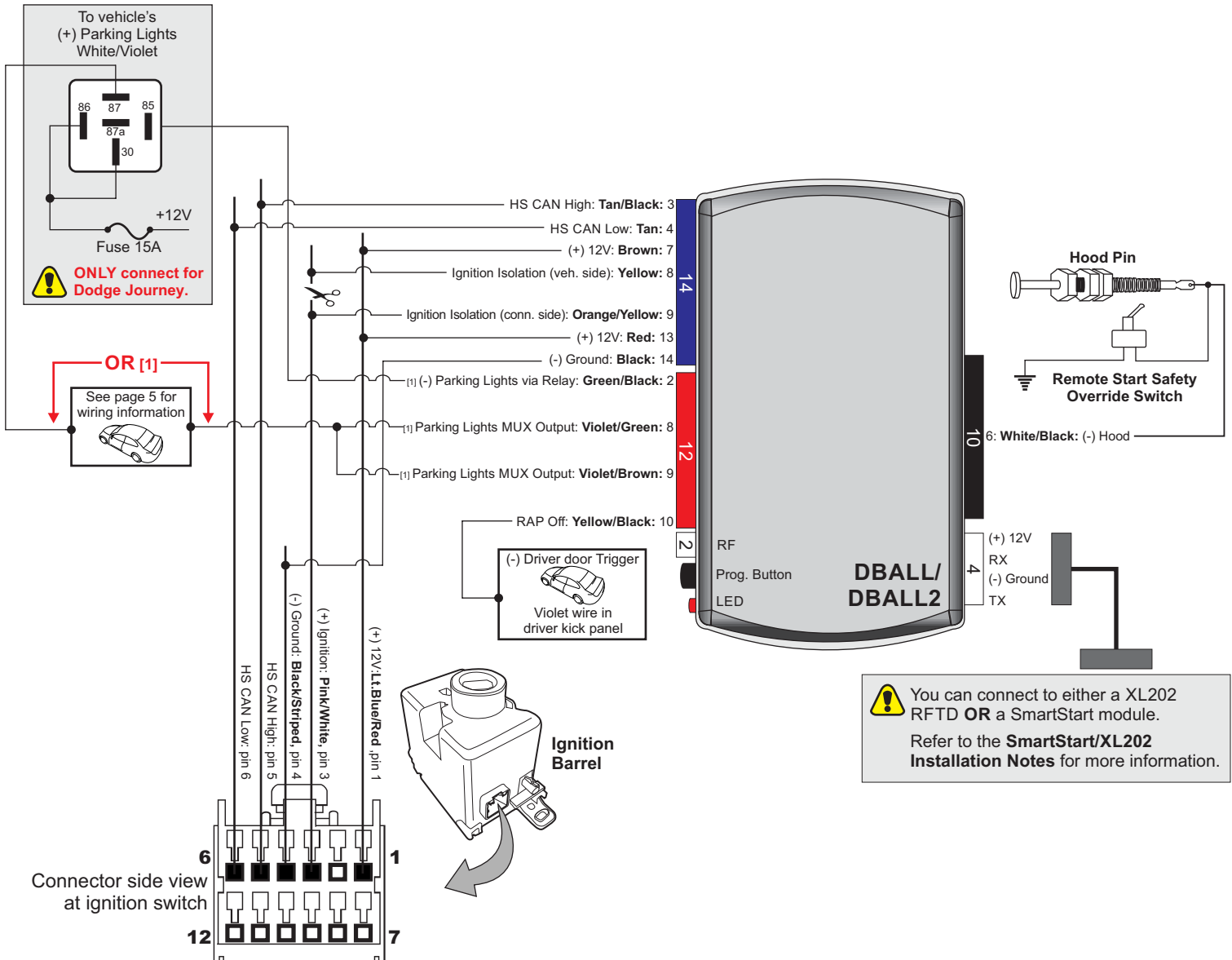
⚠ With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Installation Type 1b (without T-Harness)



Important!

The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.



! You can connect to either a XL202 RFTD **OR** a SmartStart module. Refer to the **SmartStart/XL202 Installation Notes** for more information.

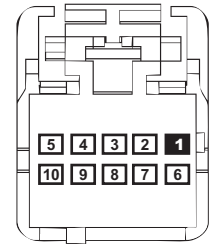
[1] See Parking Lights wiring reference chart for the appropriate Parking Lights configuration.

! With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

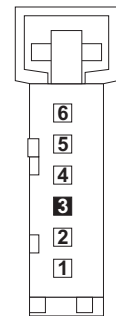
Parking Light Vehicle Wiring Reference Chart (Type 1)

Vehicle	Years	Vehicle Wire	Location on vehicle	Polarity	DBALL Output from 12 Pin connector
Chrysler					
Town & Country	2011+	White/Green	Black connector at light switch, pin 3	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Town & Country	2008-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Dodge/Ram					
1500	2011+	White	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
2500	2011+	White	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
3500	2011+	White	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
C/V	2011+	White/ Lt.Green	Black connector at light switch, pin 3	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Caravan	2008-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Challenger	2008+	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Challenger (Smart Key)	2008+	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Durango	2011+	White/Green	Black connector at light switch, pin 3	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Grand Caravan	2011+	White/Green	Black connector at light switch, pin 3	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Grand Caravan	2008-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Journey	2009-10	White/Violet	Passenger kick panel	(+)	2: Green/Black: to relay for (+) parking lights
RAM	2009-10	White	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Jeep					
Grand Cherokee	2011+	White/Green	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Grand Cherokee (Smart Key)	2011+	White/Green	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Volkswagen					
Routan	2011+	White/Green	Black connector at light switch, pin 3	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Routan	2009-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX

Light switch, black 10-pin plug

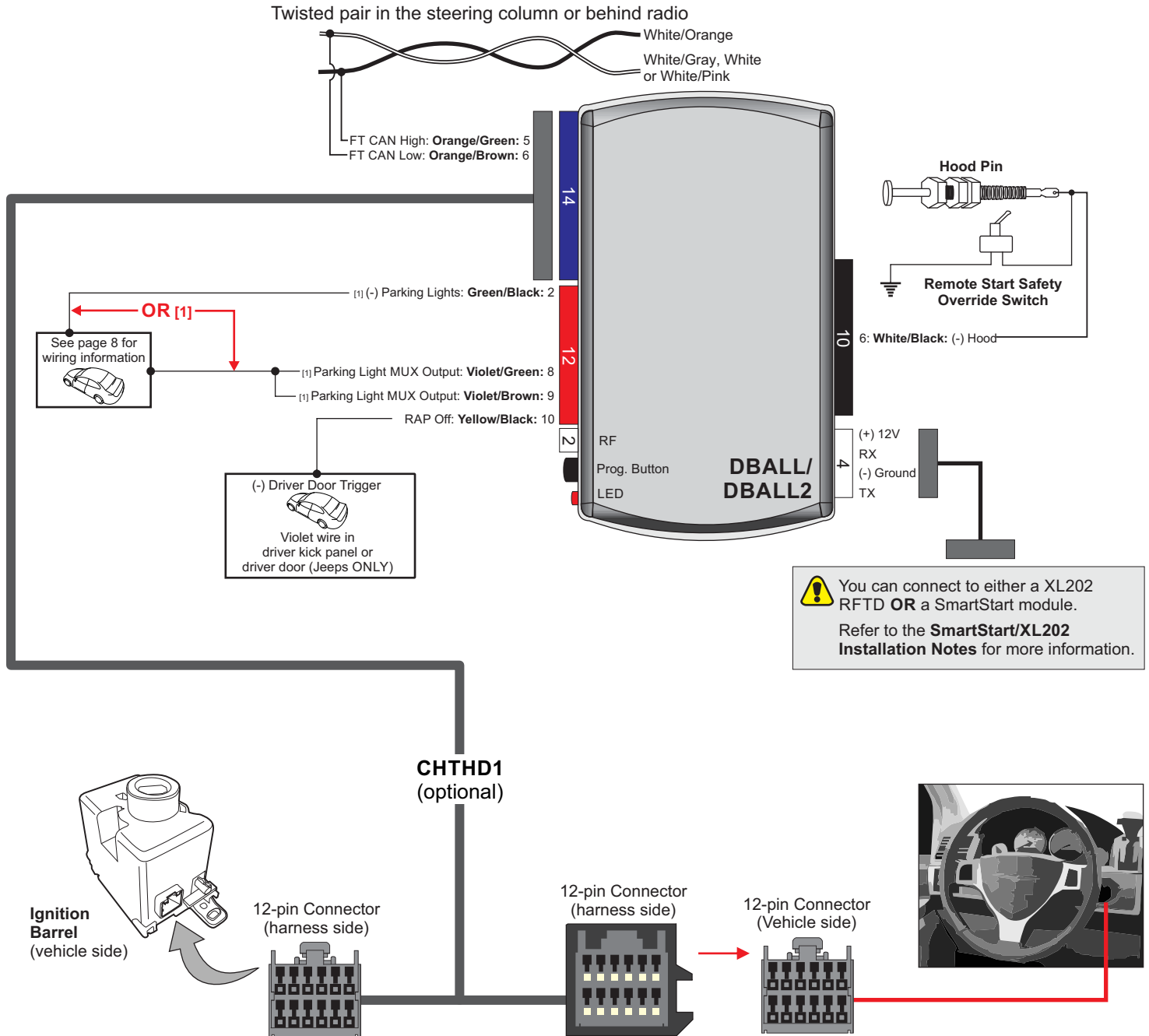


Light switch, black 6-pin plug



Installation Type 2a (with CHTHD1 T-Harness)

Important! The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.



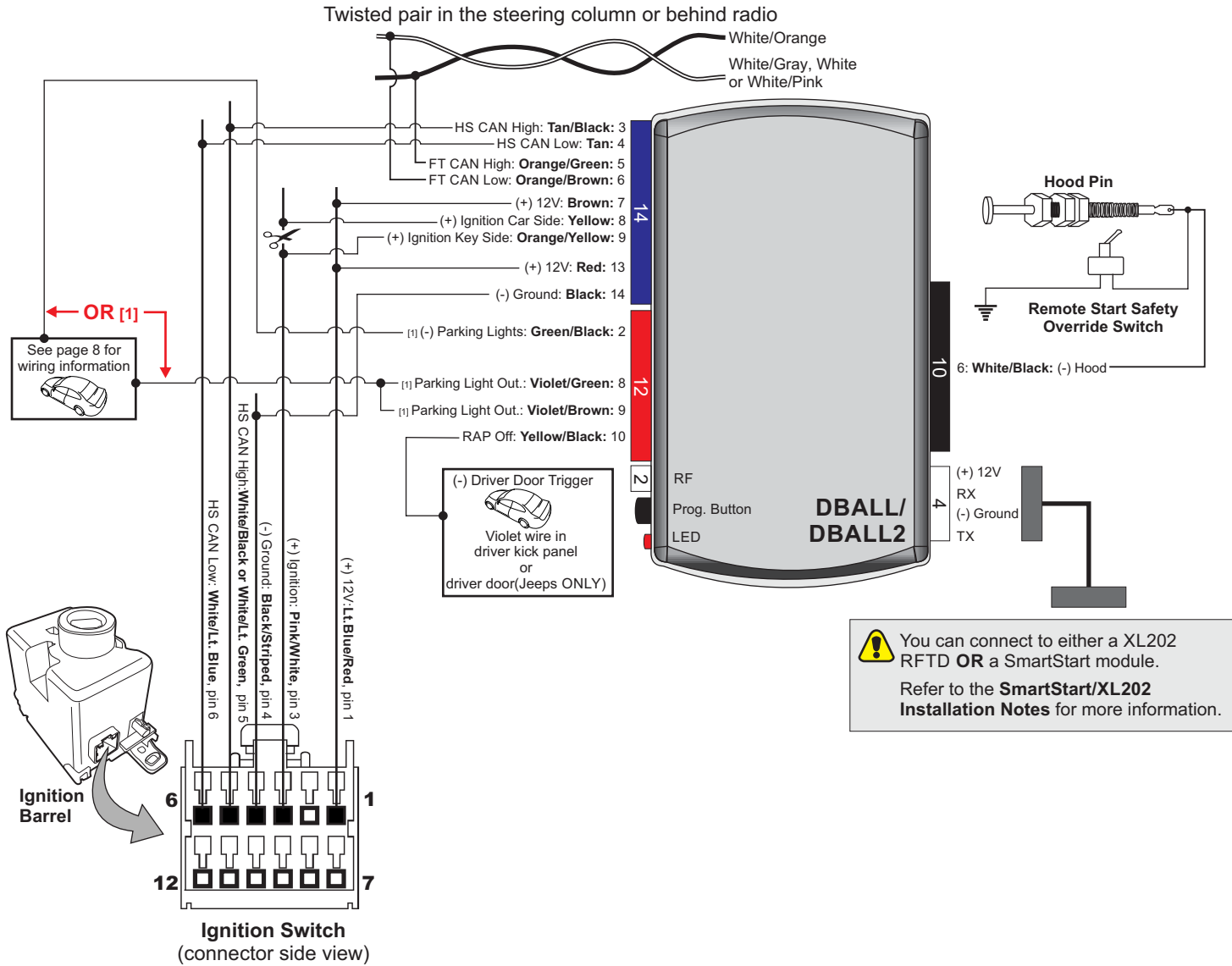
[1] See Parking Lights wiring reference chart for the appropriate Parking Lights configuration.

⚠ Wires not listed in this diagram are not required for the installation.

⚠ With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Installation Type 2b (without T-Harness)

Important! The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.



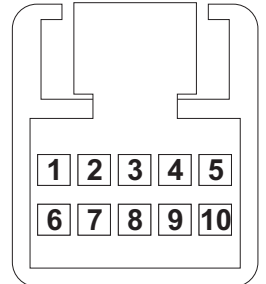
[1] See Parking Lights wiring reference chart for the appropriate Parking Lights configuration.

With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

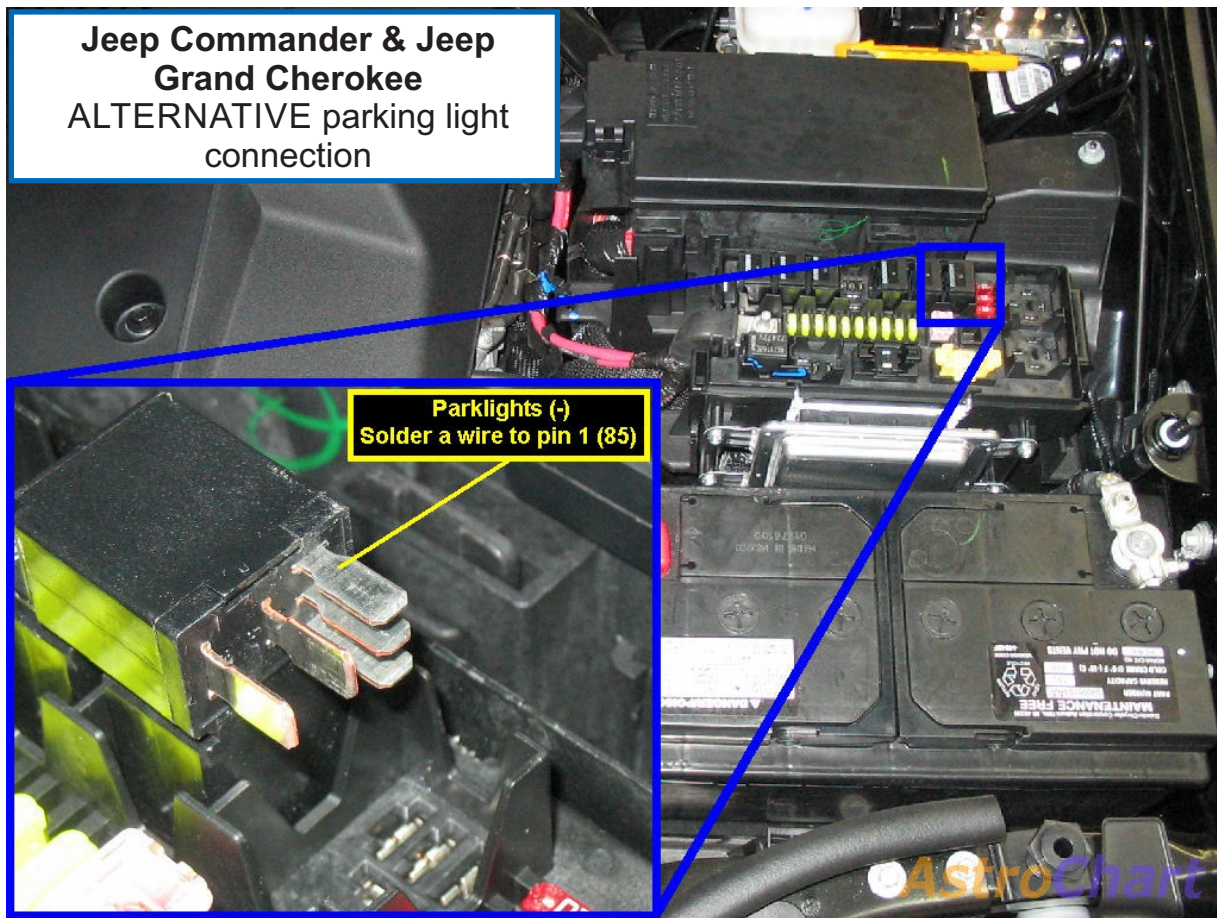
Parking Light Vehicle Wiring Reference Chart (Type 2)

Vehicle	Years	Vehicle Wire	Location on vehicle	(+) / (-)	DBALL Output from 12 Pin connector
Chrysler					
300/300c	2008-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Dodge					
Charger	2008-10	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Magnum	2008	White/Brown	Black connector at light switch, pin 1	MUX	8: Violet/Green: Parking Light MUX 9: Violet/Brown: Parking Light MUX
Jeep					
Commander	2008-10	White/Dk. Blue	Hazard light switch	(-)	(-) Parking Lights Output
Grand Cherokee	2008-10	White/Dk. Blue	Hazard light switch	(-)	(-) Parking Lights Output

Light switch, black 10-pin plug

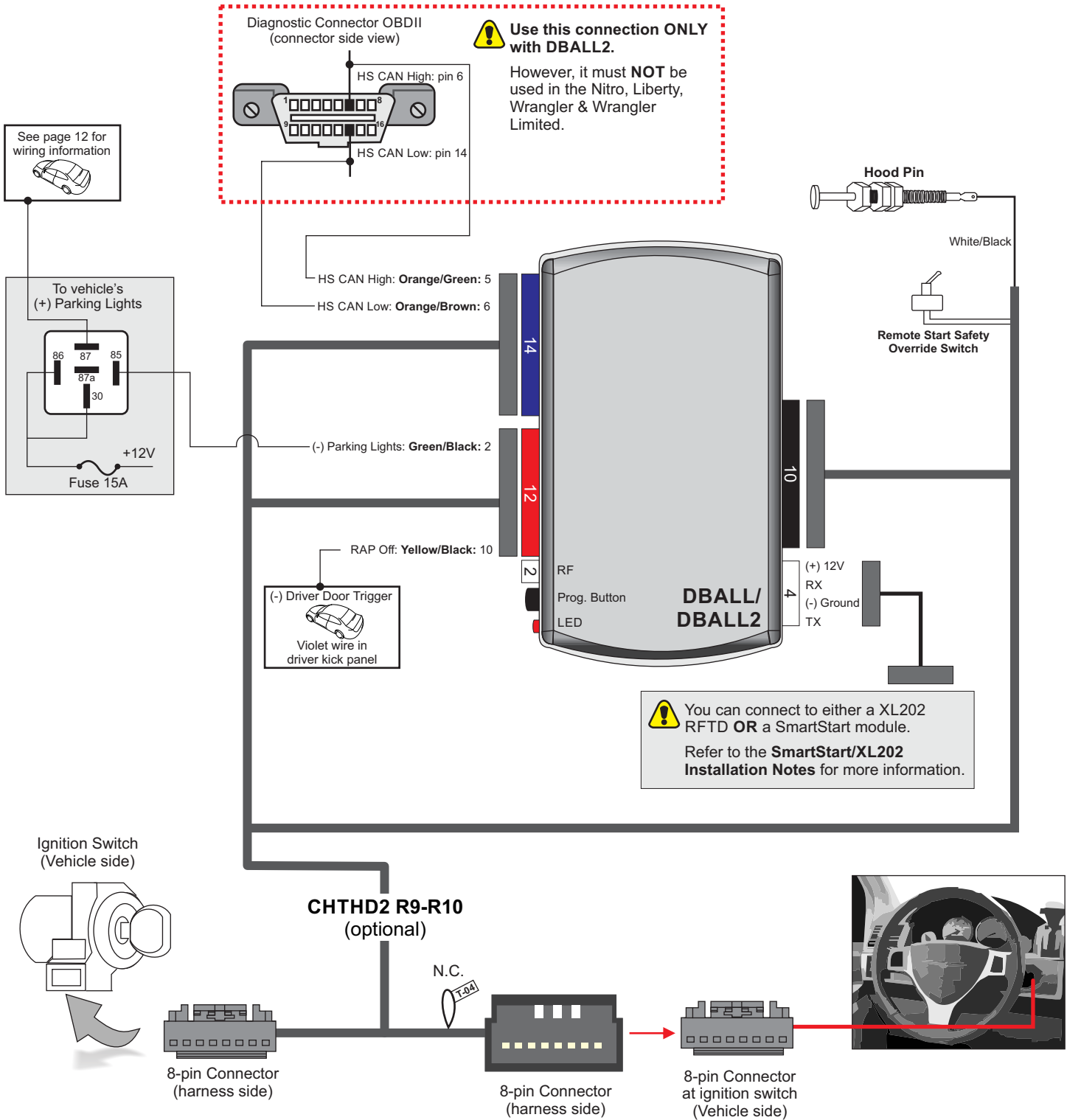


Refer to DirectWire for additional parking light locations.



Installation Type 3a (with CHTHD2 T-Harness R9-R10)

Important! The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.



Wires not listed in this diagram are not required for the installation.

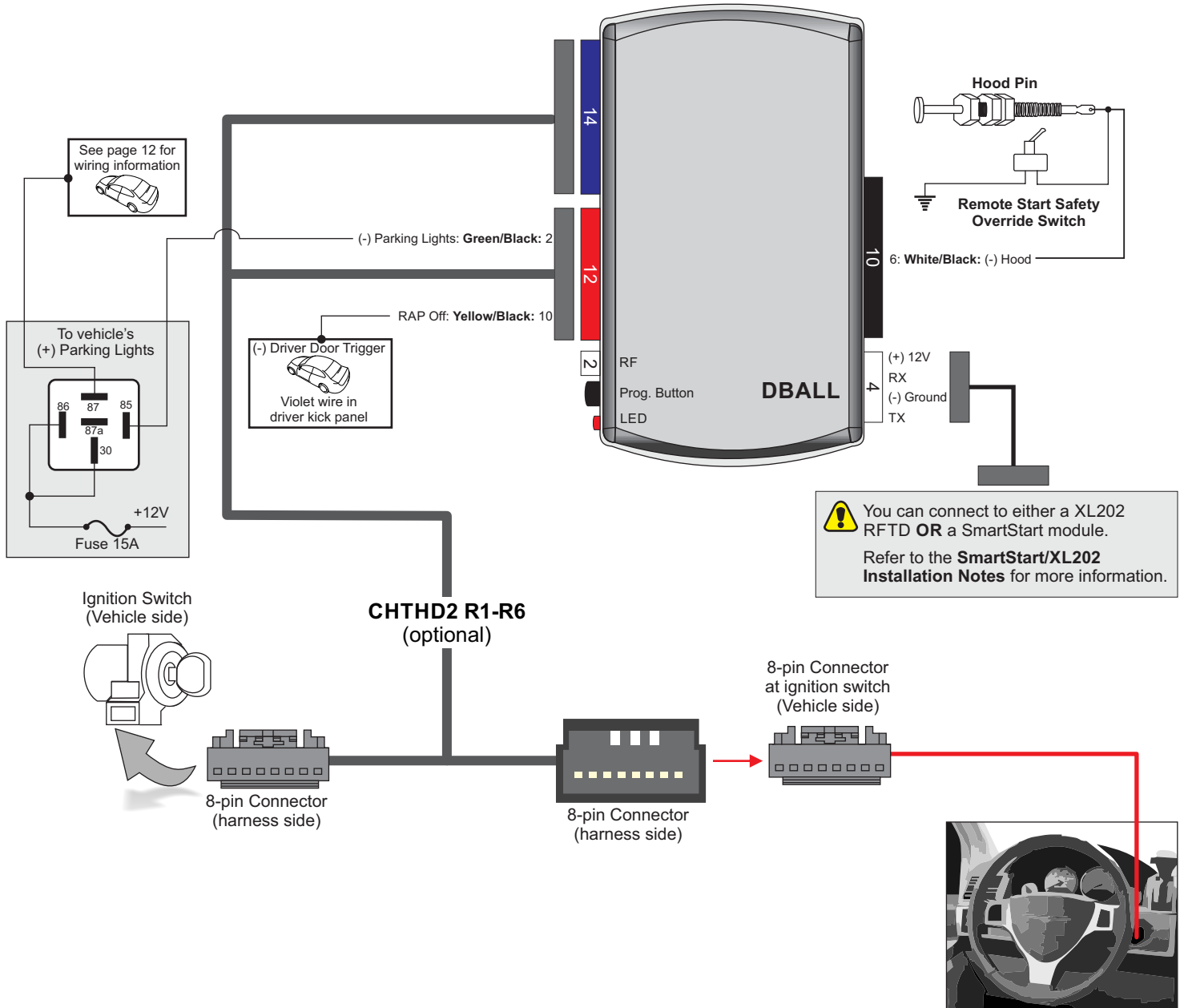
With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Installation Type 3b (with CHTHD2 T-Harness R1-R6)



Important!

The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL. Also note that this installation is NOT compatible with DBALL2.



⚠ Wires not listed in this diagram are not required for the installation.

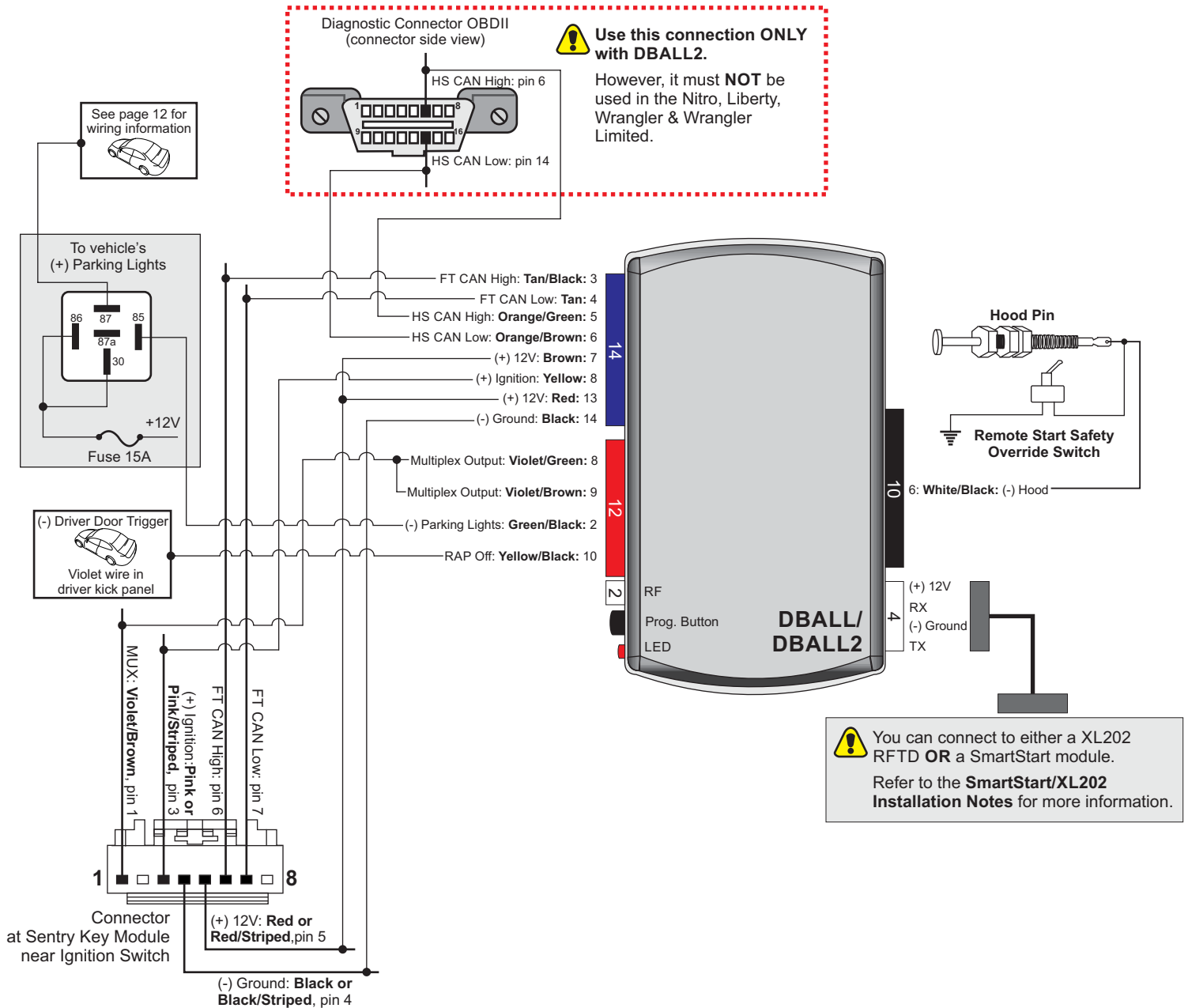
⚠ With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Installation Type 3c (without T-Harness)



Important!

The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.

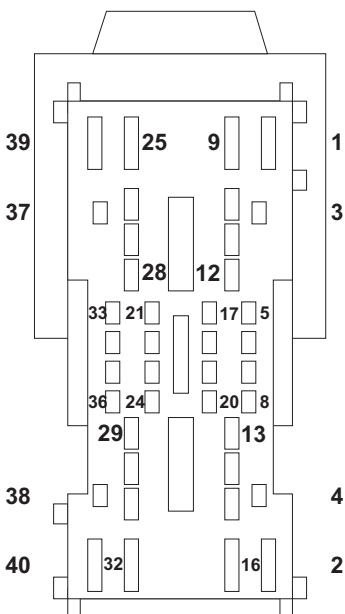


Warning! With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

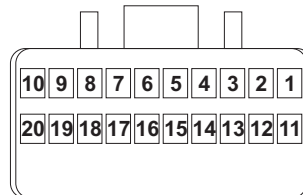
Parking Light Vehicle Wiring Reference Chart (Type 3)

Vehicle	Years	Wire	Polarity	Location
Chrysler				
200	2011-14	White/Violet	(+)	Driver kick panel
Aspen	2007-09	Pink/Red	(+)	Driver kick fuse box, black 40-pin plug
Sebring	2007-10	White/Violet	(+)	Driver kick panel
Sebring Convertible	2008-10	White/Violet	(+)	Driver kick panel
Sebring Sedan	2007-10	White/Violet	(+)	Driver kick panel
Dodge				
Avenger	2008+	White/Violet	(+)	Driver kick panel
Caliber	2007-12	White/Violet	(+)	Driver kick panel
Dakota	2007-11	Pink/Red	(+)	Underhood fuse box, black 20-pin plug
Durango	2007-09	Pink/Red	(+)	Driver kick fuse box, black 40-pin plug
Nitro	2007-11	White/Violet	(+)	Driver kick panel
RAM	2006-08	White/Gray	(+)	Above driver kick, gray 74-pin plug
Jeep				
Compass	2007+	White/Violet	(+)	Driver kick panel
Liberty	2008-12	White/Violet	(+)	Driver kick panel
Patriot	2007+	White/Violet	(+)	Driver kick panel
Wrangler	2007+	White/Violet	(+)	Passenger kick panel
Wrangler Limited	2007+	White/Violet	(+)	Passenger kick panel
Mitsubishi				
Raider	2007-09	Pink/Red	(+)	Underhood fuse box, black 20-pin plug

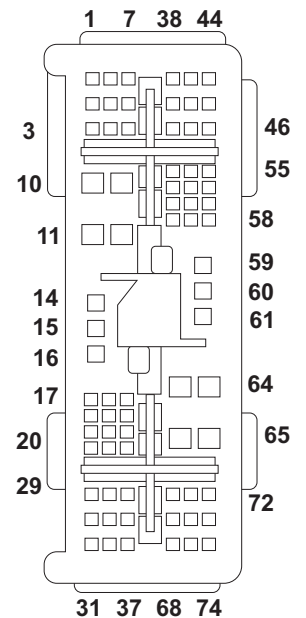
Driver kick fuse box, black 40-pin plug



Underhood fuse box, black 20-pin plug

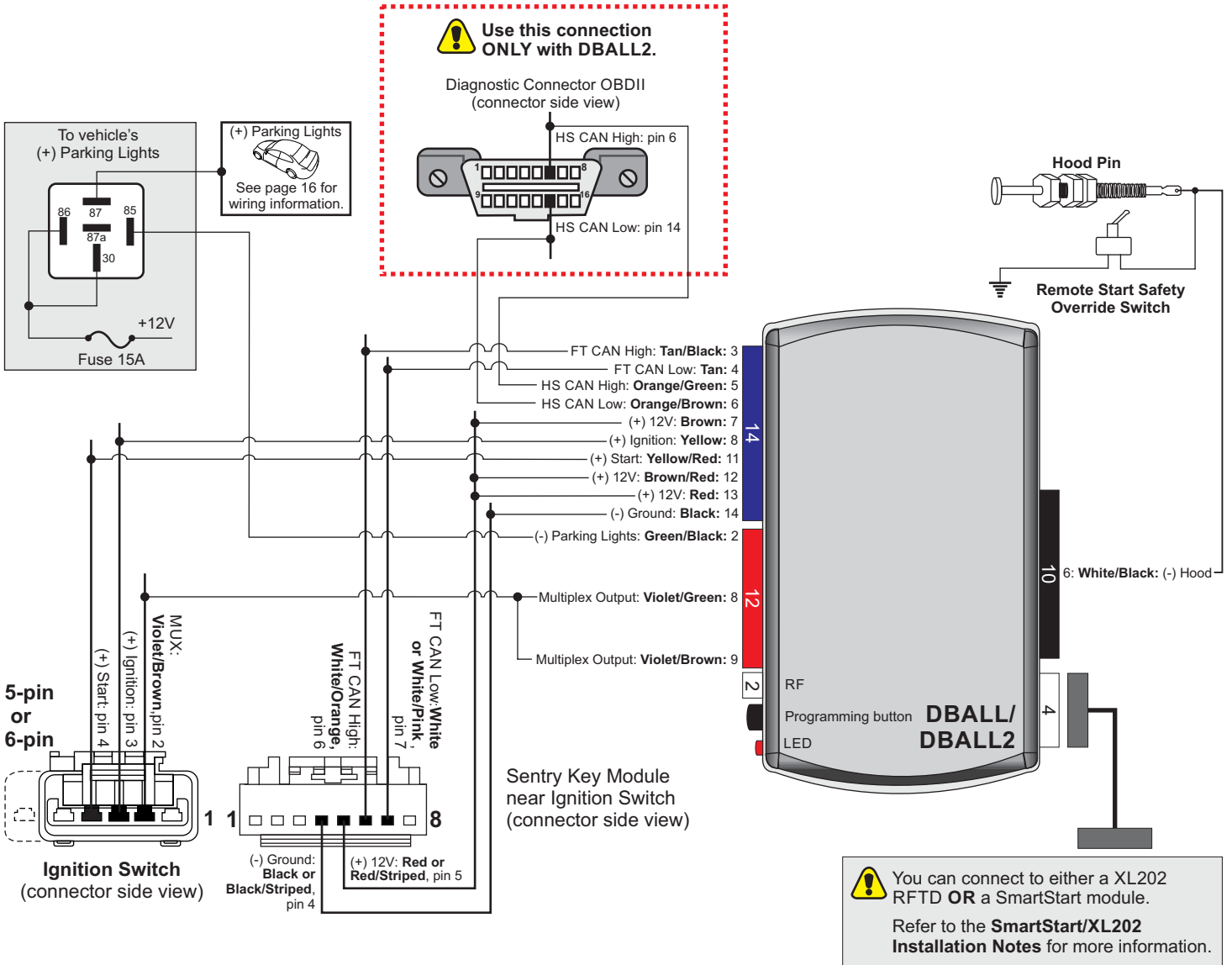


Above driver kick, gray 74-pin plug



Installation Type 4

Important! The Hood Pin and Remote Start Safety Override Switch are mandatory safety devices, but are NOT supplied with the DBALL.

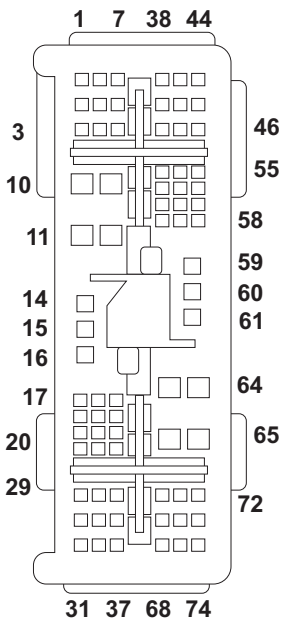


Warning! With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Parking Light Vehicle Wiring Reference Chart (Type 4)

Vehicle	Years	Wire	(+) / (-)	Location
Chrysler				
300/300c	2005-07	White/Violet	(+)	Passenger kick panel
PT Cruiser	2006-10	White/Violet	(+)	Driver kick panel
Dodge				
Caliber	2007	White/Violet	(+)	Driver kick panel
Charger	2006-07	White/Violet	(+)	Passenger kick panel
Magnum	2005-07	White/Violet	(+)	Passenger kick panel
RAM	2006	White/Gray	(+)	Above driver kick, gray 74-pin plug
Jeep				
Commander	2006-07	White/Dk. Blue	(-)	Hazard light switch
Grand Cherokee	2005-07	White/Dk. Blue	(-)	Hazard light switch

Above driver kick, gray 74-pin plug

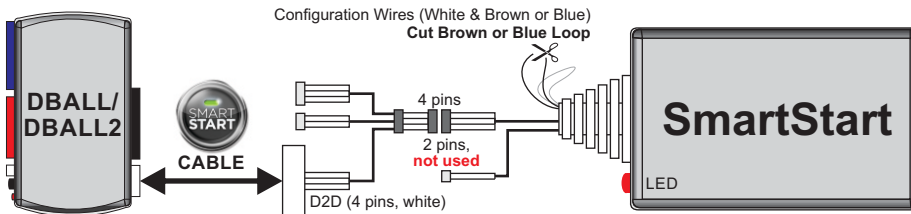


SmartStart/XL202 Installation Notes

The DBALL Remote Start Ready (RSR) solution offers two (2) configuration options to control your system: RF Kit or SmartStart (both sold separately). This section provides specific installation information for SmartStart and XL202.

SmartStart Revision A

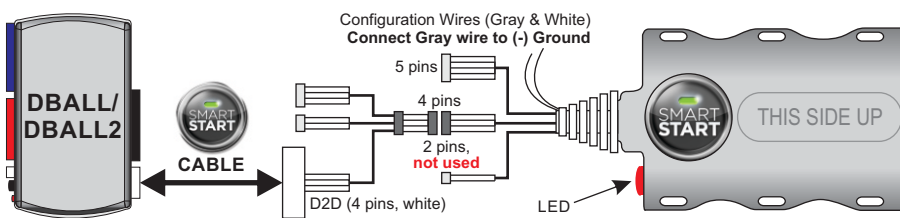
SmartStart is **optional** and not included. It **MUST** be purchased separately.



! The modules must be connected in a specific order. Refer to the **Module Programming** section for more information.

SmartStart Revision B

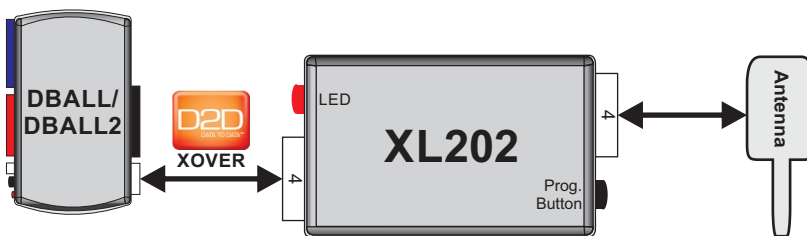
SmartStart is **optional** and not included. It **MUST** be purchased separately.



! The modules must be connected in a specific order. Refer to the **Module Programming** section for more information.

RF Kit

The **optional** XL202 and antenna are not included and **MUST** be purchased separately.



! 1. Use the D2D Crossover (XOVER) cable that is provided with XL202, and **NOT** the one in the DBALL package.
2. The modules must be connected in a specific order. Refer to the **Module Programming** section for more information.


RF Kit & PKE Combination

Refer to the Passive Keyless Entry (PKE) Installation Guide (N2102T) for detailed wiring information.

RF Kit, PKE & SmartStart BT Combination

Refer to the Passive Keyless Entry (PKE) Installation Guide (N2102T) for detailed wiring information.


Module Programming (WITH Factory Keyless)

 Refer to the LED Diagnostics section for more information and for troubleshooting purposes.

Important


Make all the required connections to the vehicle, as described in the wiring diagram(s) found in this guide, and double check to ensure everything is correct prior to moving onto the next step.

Note: Before connecting either the XL202 or SmartStart module to DBALL, it is important to ensure that the proper feature and function programming is selected using XpressVIP (version 4.5 or higher). Visit www.directechs.com to download the latest version of the application.

 **Warning!** To take advantage of advanced features, you must use XpressVIP 4.5 or higher. Using version 2.9 or 3.1 will limit available functions and features.

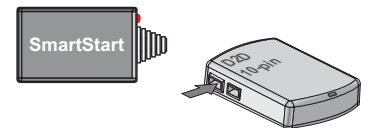
1. Connect the interface module to your computer using the **XKLoader**.
2. Open an Internet Explorer browser (version 6 or higher), and go to www.directechs.com. The detail of the platform and firmware that is currently saved on the interface module will be indicated in the top left corner of the page.
3. Select the **year**, **make** and **model** of the vehicle; the page will refresh to display the compatible firmware.
4. In the search result page, select one of the available install options (config for RSR, RXT or Standard install), and follow the instructions provided on the screen.
5. Once you have configured your options, click on the **FLASH** button to upload the firmware onto the interface module.
6. The following message will be displayed when the upload is completed:
 "The flashing is successfully completed. You may now unplug the kit."
 You can now proceed with the programming instructions below.

SmartStart Installation

 The DBALL module **must** be disconnected from any power source before SmartStart can be connected to it. Failing to do so could damage DBALL.

- a. To ensure that the D2D communication between SmartStart and DBALL works properly, the Gray wire must be connected to a ground source (**Rev B SmartStart**), and the Brown or Blue loop must be cut (**Rev A SmartStart**).
- b. Do **NOT** connect the 2-pin harness (on SmartStart). Power and ground will be provided by the DBALL D2D connector.

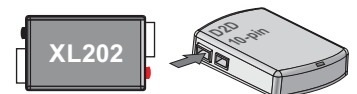
Connect SmartStart to DBALL using the D2D port.



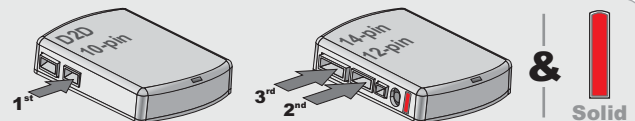
OR

XL202 Installation

Connect XL202 to DBALL using the D2D port.



- 1 Connect the 10-pin, 12-pin and 14-pin harnesses to DBALL, then wait until the LED turns ON solid red.



- 2 **Key Ignition**

Insert the key into the ignition barrel and turn it to the ON position.

It is important to wait for the LED to start flashing green. Refer to the LED Diagnostics section on page 23 for troubleshooting if the LED does not flash green within 15 seconds.



or **Push-to-Start (PTS) Ignition**

Important: Do NOT press the brake pedal.

Press the Push-to-Start (PTS) button twice to turn the ignition ON.

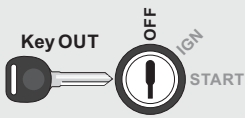


It is important to wait for the LED to start flashing green. Refer to the LED Diagnostics section on page 23 for troubleshooting if the LED does not flash green within 15 seconds.

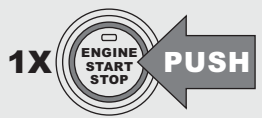


Go to the next page to complete the module programming. 


3 Turn the key to the OFF position and remove it from the ignition barrel.








or Press the Push-to-Start (PTS) button once more to turn the ignition OFF.




4 Press LOCK or UNLOCK on the **factory transmitter**. The LED turns ON solid green OR orange for 3 seconds and then turns off.



 **or**  **&**  **or**  **&**  **Off**

You have successfully completed the module programming sequence.


Module Programming (WITHOUT Factory Keyless)

 Refer to the LED Diagnostics section for more information and for troubleshooting purposes.

Important


Make all the required connections to the vehicle, as described in the wiring diagram(s) found in this guide, and double check to ensure everything is correct prior to moving onto the next step.

Note: Before connecting either the XL202 or SmartStart module to DBALL, it is important to ensure that the proper feature and function programming is selected using XpressVIP (version 4.5 or higher). Visit www.directechs.com to download the latest version of the application.

 **Warning!** To take advantage of advanced features, you must use XpressVIP 4.5 or higher. Using version 2.9 or 3.1 will limit available functions and features.

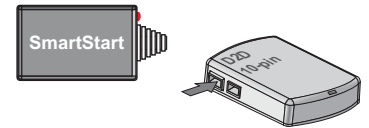
1. Connect the interface module to your computer using the **XKLoader**.
2. Open an Internet Explorer browser (version 6 or higher), and go to www.directechs.com. The detail of the platform and firmware that is currently saved on the interface module will be indicated in the top left corner of the page.
3. Select the **year**, **make** and **model** of the vehicle; the page will refresh to display the compatible firmware.
4. In the search result page, select **Config for RSR**, and follow the instructions provided on the screen.
5. Once you have configured your options, click on the **FLASH** button to upload the firmware onto the interface module.
6. The following message will be displayed when the upload is completed:
 "The flashing is successfully completed. You may now unplug the kit."
 You can now proceed with the programming instructions below.

SmartStart Installation

 The DBALL module **must** be disconnected from any power source before SmartStart can be connected to it. Failing to do so could damage DBALL.

- a. To ensure that the D2D communication between SmartStart and DBALL works properly, the Gray wire must be connected to a ground source (**Rev B SmartStart**), and the Brown or Blue loop must be cut (**Rev A SmartStart**).
- b. Do **NOT** connect the 2-pin harness (on SmartStart). Power and ground will be provided by the DBALL D2D connector.

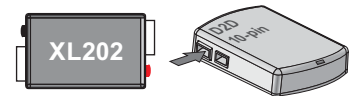
Connect SmartStart to DBALL using the D2D port.



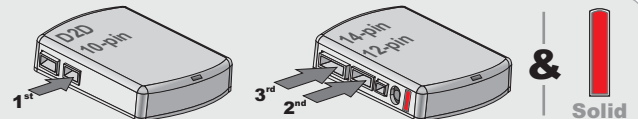
OR

XL202 Installation

Connect XL202 to DBALL using the D2D port.



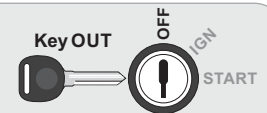
- 1** Connect the 10-pin, 12-pin and 14-pin harnesses to DBALL, then wait until the LED turns ON solid red.



- 2** Insert the key into the ignition barrel and turn it to the ON position.
 It is important to wait for the LED to start flashing green.*
 * Refer to the LED Diagnostics section on page 22 for troubleshooting if the LED does not flash green within 15 seconds.



- 3** Turn the key to the OFF position and remove it from the ignition barrel.



- 4** Press and release the programming button.
 The LED turns ON solid green OR orange for 3 seconds and then turns OFF.

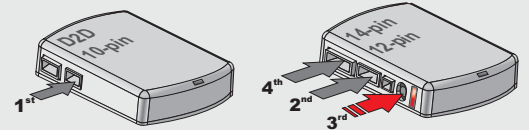


You have successfully completed the module programming sequence.

Module Reset

A module reset will only erase programming performed in the previous steps. All settings (firmware) and settings flashed to the module using the web configuration tool will not be affected.

- 1 If required for your installation, connect the 10-pin & 12-pin harnesses to the module. Press and hold the programming button, then connect the 14-pin harness to the module.



- 2 Wait 3 seconds until the LED turns ON solid orange then release the programming button. The LED turns ON solid red.

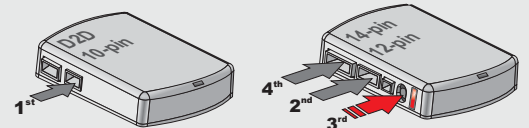


Hard Reset

Warning Against Executing a Hard Reset!

A hard reset will revert the flashed firmware back to its default settings. Depending on the installation, some settings (such as RFTD and D2D options) may have to be reconfigured. See the **Feature & Option List** section of this guide.

- 1 If required for your installation, connect the 10-pin & 12-pin harnesses to the module. Press and hold the programming button, then connect the 14-pin harness to the module.



- 2 Wait 3 seconds until the LED turns ON solid orange, and wait 10 more seconds until the LED starts to flash orange and red.



- 3 Release the programming button. The LED turns ON solid red.



Feature & Option List

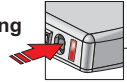
It is recommended to configure all the features and options listed below using the configuration tool found on the module flashing page on www.directechs.com. The web offers more options; however, manual configuration of the features is possible using the information on this page.

* Default option

Feature	Operation	Flashes / Option	Description
1	RF Output Type	1. Disabled*	Module is connected to a remote starter using a standard installation.
		2. RFTD Output	Module is connected to an XL202 using an RSR or RXT installation (when available).
		3. SmartStart	Module is connected to SmartStart using an RSR or RXT installation (when available).
2	Unlock Driver Priority	1. Driver Priority*	Unlocks only the driver door on first press and unlocks all doors on a second press within 5 seconds.
		2. All	Unlocks all doors on first press.
3	Trunk	1. Disabled	1. Disabled: does not operate any function in the vehicle. 2. Trunk: Will release the trunk, if available. 3./4. Right/Left Sliding Door: Will operate the sliding door.
		2. Trunk*	
		3. Right Sliding Door	
		4. Left Sliding Door	
4	Aux1	1. Disabled*	2. Trunk: Will release the trunk, if available. 3./4. Right/Left Sliding Door: Will operate the sliding door.
		2. Trunk	
		3. Right Sliding Door*	
		4. Left Sliding Door	
5	Aux2	1. Disabled	3./4. Right/Left Sliding Door: Will operate the sliding door.
		2. Trunk	
		3. Right Sliding Door	
		4. Left Sliding Door*	
6	Heated Seats	1. Disabled*	No operation.
		2. Enabled	Will activate the Heated Seats Control feature (see feature #7) if available.
7	Heated Seats/Defroster Temperature Control (Feature 6 must be enabled)	1. 32° Farenheit (0° Celsius)*	When feature #6 (Heated Seats) is enabled, it will activate the heated seats upon remote start when temperature is below 32 °F (0 °C).
		2. 23° Farenheit (-5° Celsius)	When feature #6 (Heated Seats) is enabled, it will activate the heated seats upon remote start when temperature is below 23 °F (-5 °C).
		3. 41° Farenheit (5° Celsius)	When feature #6 (Heated Seats) is enabled, it will activate the heated seats upon remote start when temperature is below 41 °F (5 °C).
		4. Always ON	When feature #6 (Heated Seats) is enabled, it will activate the heated seats at any temperature.
8	Heated Seats Temperature Level (Feature 6 must be enabled)	1. High*	When Heated Seats are activated, they will be set to HIGH.
		2. Low	When Heated Seats are activated, they will be set to LOW.
9	Smart OEM Alarm Control	1. Disabled	The OEM alarm will not be controlled by DBALL upon remote start. No disarm or arm command will be executed at the beginning or end of the sequence; it must be controlled by the Remote Starter.
		2. Safelock	Smart OEM Alarm Control will behave like a standard Safelock feature on a remote starter. It will unlock at the beginning of the sequence, and relock after start and shutdown.
		3. Enabled*	Smart OEM Alarm Control will synchronize with the OEM alarm so that it will disarm and rearm the vehicle in the remote start sequence, only when required. The reason for this is, factory alarm control must often be done by lock or unlock operation. This could create unnecessary actions on door lock modules, such as the horn to honk. When possible, Smart OEM Alarm Control will monitor the alarm and door lock status to detect if the disarm or rearm is required. If the vehicle is unlocked or is not equipped with factory alarm, the disarm/rearm will not be executed. Smart OEM Alarm Control will also monitor the remote starter actions so that the factory alarm control is not done twice. A remote starter, for which the Safelock feature is active, will work perfectly with this option and will make it invisible to the user.

Feature Programming

Programming
Button



To enter feature programming routine

- Turn the ignition ON, then OFF.
- **Within 5 seconds**, press and HOLD the programming button until the LED turns ON orange (after 3 seconds). Release the Programming button.
- The LED will flash green once slowly to indicate the feature number is 1. After a short delay, the LED flashes red rapidly to indicate the current option of feature 1 (i.e. 1x green followed by 1x red indicates feature 1 is set to option 1). The flashing sequence will repeat until a new command is entered.

Changing feature options

- Press the lock/arm or unlock/disarm button on aftermarket transmitter to change the option of the selected feature.
- The LED flashes red rapidly the number of times equal to the current option number. After a short delay, the LED flashes green slowly the number of times to indicate the current feature. The flashing sequence will repeat until a new command is entered.

Accessing another feature

- Press and release the programming button a number of times to advance from the current feature to the next desired feature.
- The LED flashes green slowly the number of times equal to the feature number. After a short delay, the LED flashes red rapidly to indicate the current option of the current feature. The flashing sequence will repeat until a new command is entered.

When the maximum number of features or options is reached, the LED will start flashing again from the first feature or option.
















Once a feature is programmed

- Other features can be programmed.
- The feature programming can be exited.

Exiting feature programming

- No activity for 30 seconds; after 30 seconds, the LED will turn ON orange for 2 seconds to confirm the end of the programming sequence.
OR
- Press and HOLD the programming button for 3 seconds. After 3 seconds, the LED will turn ON orange for 2 seconds to confirm the end of the programming sequence.

LED Diagnostics & Troubleshooting

LED	Status	Description	Troubleshooting
Module Programming			
 Off	Off	Module has no power.	Check the power connections.
 Solid	Solid red	The bus type cannot be detected.	Make sure the connections to the data bus are correct and insert the key in the ignition switch.
 Flashes	Flashes orange	The vehicle type cannot be detected.	Insert the key in the ignition switch and turn to the ON position. You may need to wait up to 10 seconds.
 Flashes	Flashes green	Waiting for keyless.	Remove the key from the ignition switch and press a keyless button.
 Solid x3 secs	Solid green for 3 seconds	Module was successfully programmed or is already programmed.	Normal operation.
 Solid x3 secs	Solid orange for 3 seconds	Module was successfully programmed without diagnostics.	Normal operation.
Active Ground While Running			
 Flashes	Flashes green	GROUND OUT ON (GWR) command received.	Otherwise, the Ground While Running (status) signal was lost or was never received by the module. Commands can come from RF, D2D or W2W.
 Flashes	Flashes red & orange	IGNITION ON command received.	Otherwise, the ignition signal was not received by the module. In a W2W install, it will show only if the ignition input wire is used.
 Flashes quickly	Flashes green quickly	START ON command received.	Otherwise, the start signal was not received by the module. In a W2W install, it will show only if the ignition input wire is used.
Inactive Ground While Running			
 Flashes x1	Flashes orange x1	Lock command has been received	Normal operation.
 Flashes x2	Flashes orange x2	Unlock command has been received	
 Flashes x3	Flashes orange x3	Trunk command has been received	
 Flashes x4	Flashes orange x4	AUX1 command has been received	
 Flashes x5	Flashes orange x5	AUX2 command has been received	
External Module Synchronization			
 Flashes red, red and orange	Flashes red, red and orange x10	OBDII feature not supported. Diagnostic data bus not detected.	Some features are not supported by SmartStart. This can be caused by missing wire connections or module hardware limitation. Refer to the wiring installation section to check the connections.

Parking Light Error Codes

The parking lights on your vehicle will flash a specific number of times 3 seconds following an unscheduled shutdown or failure to start. Each flashing pattern is described below.

Flashes	Diagnostic
1	Runtime expired.
2	Over-rev shutdown.
3	Low/No RPM.
4	Transmitter shutdown.
5	Brake shutdown.
6	Hood shutdown/Remote start safety override switch is ON*.
7	Remote start safety override switch is ON*.

* If the vehicle hood status is supported through data, safety override switch input will report 7 flashes.

Limited One Year Consumer Warranty

For a period of ONE YEAR from the date of purchase of a Directed Electronics remote start or security product, Directed Electronics. ("DIRECTED") promises to the original purchaser, to repair or replace with a comparable reconditioned piece, the security or remote start accessory piece (hereinafter the "Part"), which proves to be defective in workmanship or material under normal use, provided the following conditions are met: the Part was purchased from an authorized DIRECTED dealer; and the Part is returned to DIRECTED, postage prepaid, along with a clear, legible copy of the receipt or bill of sale bearing the following information: consumer's name, address, telephone number, the authorized licensed dealer's name and complete product and Part description.

This warranty is nontransferable and is automatically void if the Part has been modified or used in a manner contrary to its intended purpose or the Part has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defect in materials or construction.

TO THE MAXIMUM EXTENT ALLOWED BY LAW, EXCEPT AS STATED ABOVE, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NONINFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DIRECTED HEREBY DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING DEALERS OR INSTALLERS. DIRECTED IS NOT OFFERING A GUARANTEE OR INSURANCE AGAINST VANDALISM, DAMAGE, OR THEFT OF THE AUTOMOBILE, ITS PARTS OR CONTENTS, AND DIRECTED HEREBY DISCLAIMS ANY LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, LIABILITY FOR THEFT, DAMAGE, OR VANDALISM. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DIRECTED OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DIRECTED SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DIRECTED DEALER'S PURCHASE PRICE OF THE PART. DIRECTED SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR AT DIRECTED'S OPTION THE PART AS DESCRIBED ABOVE.


This warranty only covers Parts sold within the United States of America and Canada. Parts sold outside of the United States of America or Canada are sold "AS-IS" and shall have NO WARRANTY, express or implied. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State. DIRECTED does not and has not authorized any person or entity to create for it any other obligation, promise, duty or obligation in connection with this Part. For further details relating to warranty information of Directed products, please visit the support section of DIRECTED's website at: www.directed.com



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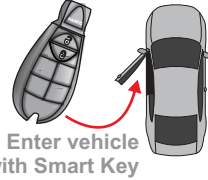
This Interface kit / Data Bus Interface part has been tested on the listed vehicles. Other vehicles will be added to the select vehicle list upon completion of compatibility testing. Visit website for latest vehicle application guide. DISCLAIMER: Under no circumstances shall the manufacturer or the distributors of the bypass kit / data bus interface part(s) be held liable for any consequential damages sustained in connection with the part(s) installation. The manufacturer and its distributors will not, nor will they authorize any representative or any other individual to assume obligation or liability in relation to the interface kit / data bus interface part(s) other than its replacement. N.B.: Under no circumstances shall the manufacturer and distributors of this product be liable for consequential damages sustained in connection with this product and neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than the replacement of this product only.

Protected by U.S. Patents: 5,719,551; 6,011,460 B1 *; 6,243,004 B1; 6,249,216 B1; 6,275,147 B1; 6,297,731 B1; 6,346,876 B1; 6,392,534 B1; 6,529,124 B2; 6,696,927 B2; 6,756,885 B1; 6,756,886 B2; 6,771,167 B1; 6,812,829 B1; 6,924,750 B1; 7,010,402 B1; 7,015,830 B1; 7,031,826 B1; 7,046,126 B1; 7,061,137 B1; 7,068,153 B1; 7,205,679 B1; Cdn. Patent: 2,320,248; 2,414,991; 2,415,011; 2,415,023; 2,415,027; 2,415,038; 2,415,041; 2,420,947; 2,426,670; 2,454,089; European Patent: 1,053,128; Pat. Pending: 2,291,306. Made in Canada.


Vehicle Takeover

1 Press the remote start button on the transmitter to start the vehicle.* 

2 Press the Unlock button on the factory or aftermarket remote.*  **OR** 



3 Enter the vehicle, while making sure the key is inside with you. 


Key Ignition

Insert the key into the ignition barrel and turn it to the ON position. 

4 — **or** —

Push-to-Start (PTS) Ignition


Important: Do NOT press the brake pedal.  Do NOT press the brake pedal. Press the Push-to-Start (PTS) button twice to turn the ignition ON. 


5 Press the brake pedal, put the car in gear and drive off. 

* Your aftermarket remote may differ from the model shown in the illustrations.

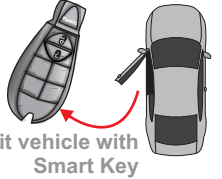
Pit Stop Mode

The Pit Stop Mode feature is practical when you need to stop and run an errand, but wish to keep the engine running.

1 Stop the vehicle in a safe parking spot and put the gear in Park (P). 

Press the button to remote start the vehicle.* **2** **Note:** If the vehicle is equipped with a PTS feature, press the Push-to-Start (PTS) button once before leaving the car. 

3 Press the PTS button once or remove key from the ignition. 

4 It is now safe to leave the engine running and exit the vehicle with the Smart Key in hand. **Note:** We recommend that you always lock the doors of your vehicle when leaving it unattended. 

* Your aftermarket remote may differ from the model shown in the illustrations.

Parking Light Error Codes

The parking lights on your vehicle will flash a specific number of times 3 seconds following an unscheduled shutdown or failure to start. Each flashing pattern is described below.

Flashes	Diagnostic
1	Runtime expired.
2	Over-rev shutdown.
3	Low/No RPM.
4	Transmitter shutdown.
5	Brake shutdown.
6	Hood shutdown/Remote start safety override switch is ON*.
7	Remote start safety override switch is ON*.

* If the vehicle hood status is supported through data, safety override switch input will report 7 flashes.









Remote Start Ready (RSR)



Remote Start Ready (RSR) is a function that enables the interface module to remote start the vehicle completely on its own. Consequently, there is no need for an aftermarket or an OEM remote starter in order to start the vehicle from a distance.

List of Available Commands

Note that the information below is for Viper, Clifford and Python models. Icons and commands may differ depending on the remote brand and model purchased. Refer to your authorized installation center for more information.

Button(s)	Actions
	Press & hold for 1 second to lock.
	Press & hold for 1 second to unlock.
	Press & hold for 1 second to remote start.
	Press & hold for 5 seconds to activate the trunk release (optional).
f x1 + 	Press f once, then  to activate the rear hatch/tail glass release (optional).*
f x1 + 	Press f once, then  to reset the remote starter runtime.

* This output is configurable. see your authorized installation center for more information.

Quick Reference Guide

DBALL/DBALL2-CHRYSLER Remote Start Ready (RSR) Installation

SmartStart Compatible



This system is compatible with Directed SmartStart 3.0. For a complete list of supported features, please visit www.mysmartstart.com.



What is SmartStart?

Now you can remote start, lock and unlock your car just by pushing a button on your smartphone; using the SmartStart App from Directed, the leader in vehicle security and remote start. The simple graphical interface gives you control over the following features of your installed remote start or security with remote start system:

- Lock/Arm
- Unlock/Disarm
- Remote Car Starter
- Trunk Release
- Panic
- Aux Channels

You can also control multiple vehicles – great for families – and assign more than one user to control a vehicle. It's easy with SmartStart!

But, this is only the beginning! SmartStart is loaded with additional features including GPS tracking, SmartSchedule, vehicle status, roadside assistance, home control, parked car finder and more.

3.0 enables a "Cloud-Connected Car" like never before, providing an entirely new level of 2-way interaction with your vehicle. Connectivity is managed through the Directed Cloud Services (DCS) network linking car, app, end user, and the Internet.

For more information, visit www.mysmartstart.com.

Notes
