



**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 DBALL2 in Remote Start Ready (RSR) mode. This solution offers three (3) configuration options to control your system: 3x OEM Lock Remote Start Activation, RF Kit or SmartStart (all 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.



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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 table below lists the vehicles and features which are compatible with this product. Refer to the following pages for more information on installation wiring, programming and troubleshooting for these vehicles.

Vehicles	2016	2015	2014	PK-Immobilizer Bypass-Data No Key Req'd	AV-Parking Lights Control	DL-Arm Factory Security	DL-Disarm Factory Security	DL-Door Lock Control	DL-Door Unlock	DL-Driver Priority Unlock	DL-Trunk / Hatch Release	EIPS	RS-3x LOCK START (Start control using OEM Remote)	RS-RAP Shut Down (Retained ACC Power)	RS-Remote Start Ready	RS-Remote Start Ready PTS Ign-RFTD	RS-Remote Start Ready Sid Ign-RFTD	RS-SmartStart	RS-Tach / RPM Output	SS-Entry Monitoring ALL Door Pins	SS-Entry Monitoring Driver Door Pin	SS-Entry Monitoring Hood Pin	SS-Entry Monitoring Trunk/Hatch Pin	SS-Factory Alarm Trigger Monitoring	ST-Brake Status (foot/brake)	ST-Ignition Status
<b>Lexus</b>																										
IS 250 (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IS 350 (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NX 200t (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NX 300h (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RC 350 (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RC F (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>Toyota</b>																										
Highlander (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Highlander Hybrid	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tacoma (Smart Key)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

**Legend:**

- AV: Horn & Lights Control
- DL: OE Door Lock & Alarm Controls
- EIPS: Engine Idle Protection System
- FOB: Sync CAN Interface w/FOB Remote
- PK: Transponder & Immobilizer Override
- RS: Remote Start & Engine Controls
- SS: Integrated Security & Monitoring
- ST: Function/Feature Status

\* The Motorized Trunk feature needs to be enabled if available on your vehicle using the configuration tool found on the module flashing page on [www.directechs.com](http://www.directechs.com) or manual configuration of this feature is also possible using the information on page 9.

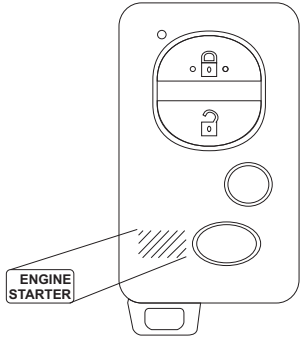
- No takeover feature is available. The vehicle will shut down as soon as a door is opened.
- To remote start the engine, the hood, hatch, and all doors must be closed.

### Important OEM Remote Starter Information

- **If the vehicle is equipped with an Add-On Lexus/Toyota OEM remote starter:**  
 The TL8 firmware will detect it and will program into convenience only (no immobilizer bypass). The reason for this is to allow aftermarket security to be installed while keeping the factory remote starter active. If you wish to use TL8 firmware to control the remote start sequence, the factory remote starter must be disconnected before programming the DBALL2 as both modules cannot coexist. See locating the OEM Remote Start on page 6.
- **If the vehicle is equipped with a BCM Enabled Lexus/Toyota OEM remote starter:**  
 The TL8 firmware will only operate if the vehicle is equipped with an OEM Remote Start System which is ENABLED by activating the Toyota/Lexus Enform Remote System in the BCM using a dealer scan tool. The vehicle does not have a physical remote start and if not equipped with an ENABLED OEM remote start system, the TL8 firmware will not program.

## How to Know if the Vehicle is Equipped with an OEM Remote Starter

1- An "ENGINE STARTER" sticker should be on the remote.



2- Remote start the OEM remote starter:  
Press the remote control's lock button twice within 2 seconds,  
then press and hold the lock button for 3 seconds.

The parking lights flash after 3 seconds. The engine starts and  
the parking lights flash repeatedly for 20 seconds.




**x2**

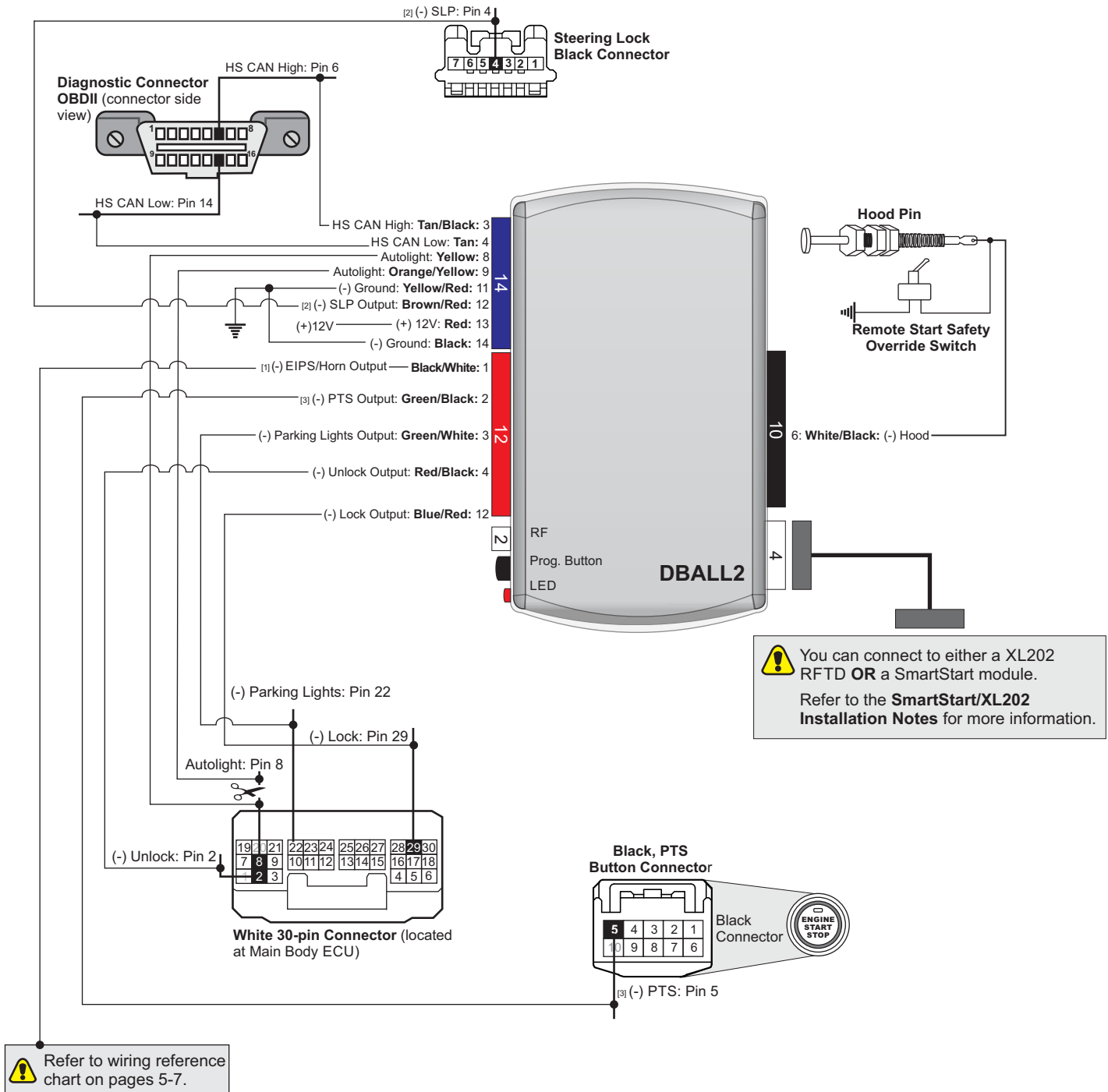
**&**



**Press & Hold  
for 3 seconds**

## Wiring Diagram

 See next page for help on locating components in the vehicle and wiring reference chart.



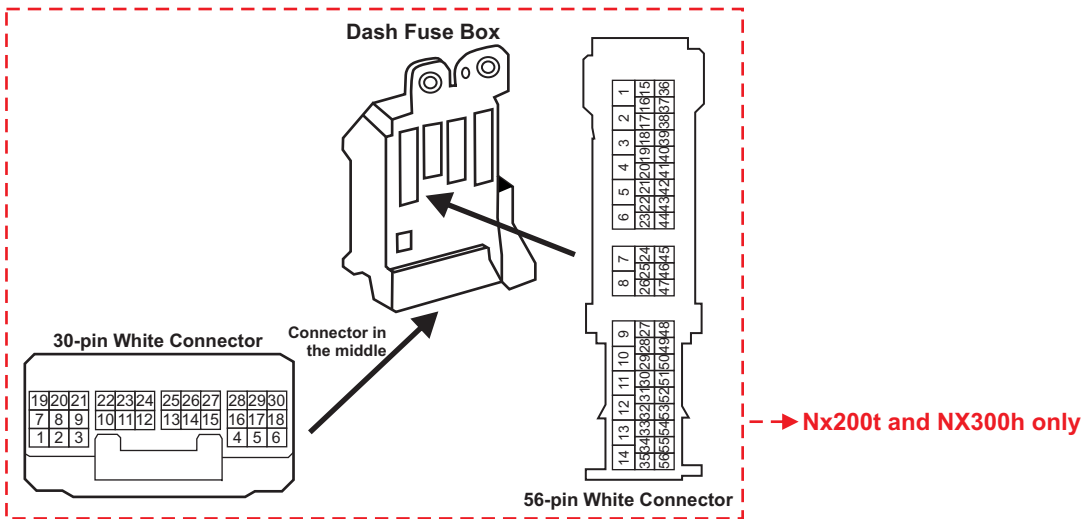
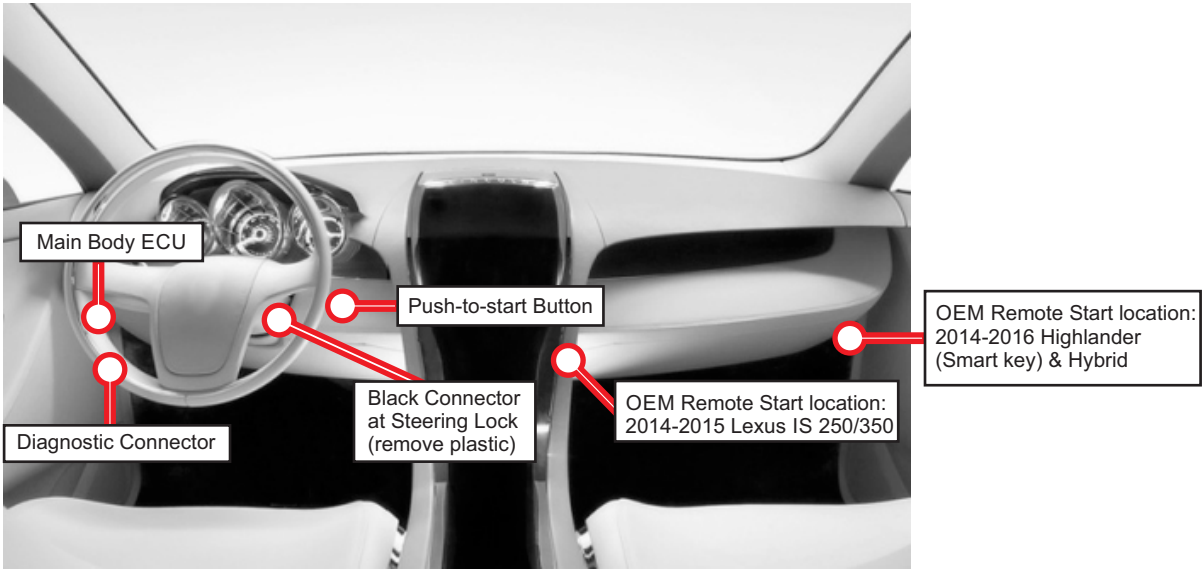
[1] This connection is **only** required when the EIPS (Engine Idle Protection System) feature is activated.

[2] **SLP:** Steering Lock Actuator Position Signal.

[3] Only required for EIPS Idle/Pit Stop Mode.

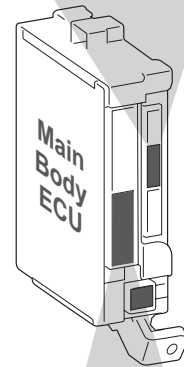
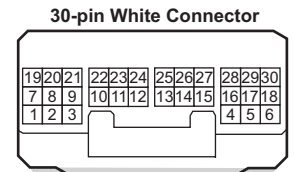
 With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

## Locating Components and the OEM Remote Starter in the Vehicle

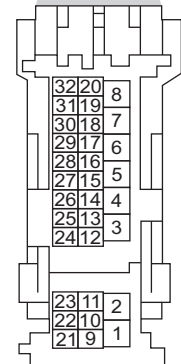


## Vehicle Wiring Reference Chart

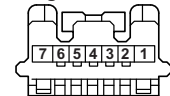
Vehicle	Function	Connector	Pin	Wire
<b>Toyota</b>				
<b>Highlander (Smart Key) 2014-2016</b>	(-) Lock	30-pin white connector at Main body ECU	29	Violet
	(-) Unlock	30-pin white connector at Main body ECU	2	Lt. Blue
	(-) Horn	32-pin white connector at dash fuse box	29	Green
	HS CAN High	OBDII under driver dash	6	Violet
	HS CAN Low	OBDII under driver dash	14	White
	(-) SLP	7-pin black steering lock connector	4	Lt. Green
	(-) PTS	10-pin black engine start/stop switch	5	Yellow
	Autolight	30-pin white connector at Main body ECU	8	Black
<b>Highlander Hybrid 2014-2016</b>	(-) Lock	30-pin white connector at Main body ECU	29	Violet
	(-) Unlock	30-pin white connector at Main body ECU	2	Lt. Blue
	(-) Horn	32-pin white connector at dash fuse box	29	Green
	HS CAN High	OBDII under driver dash	6	Violet
	HS CAN Low	OBDII under driver dash	14	White
	(-) SLP	7-pin black steering lock connector	4	Lt. Green
	(-) PTS	10-pin black engine start/stop switch	5	Yellow
	Autolight	30-pin white connector at Main body ECU	8	Black
<b>Tacoma (Smart Key) 2016</b>	(-) Lock	30-pin white connector at Main body ECU	29	Lt. Blue
	(-) Unlock	30-pin white connector at Main body ECU	2	Green
	(-) Horn	28-pin white connector at dash fuse box	28	Red
	HS CAN High	OBDII	6	Lt. Blue
	HS CAN Low	OBDII	14	White
	(-) SLP	7-pin black steering lock connector	4	Tan
	(-) PTS	10-pin black engine start/stop switch	5	Tan
	Autolight	30-pin white connector at Main body ECU	8	White



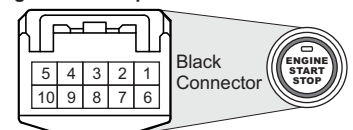
32-pin White Connector (located in the dash fuse box)



7-pin Black Steering Lock Connector

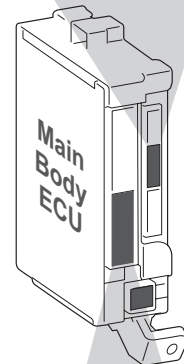
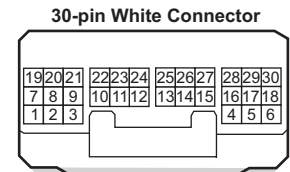


10-pin Black Engine Start/Stop Switch

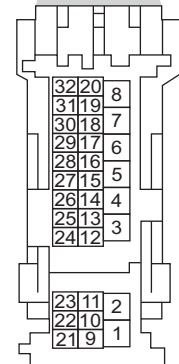


## Vehicle Wiring Reference Chart

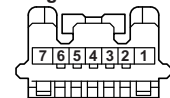
Vehicle	Function	Connector	Pin	Wire
<b>Lexus</b>				
<b>IS250/350 (Smart Key) 2014-2015</b>	(-) Lock	30-pin white connector at main body ECU	29	Blue
	(-) Unlock	30-pin white connector at main body ECU	2	Lt. Green
	(-) Horn	32-pin white connector at dash fuse box	24	Blue
	HS CAN High	OBDII	6	White
	HS CAN Low	OBDII	14	Black
	(-) SLP	7-pin black steering lock connector	4	Red
	(-) PTS	10-pin black engine start/stop switch	5	Gray
	Autolight	30-pin white connector at main body ECU	8	Pink
<b>NX200t (Smart Key) 2015</b>	(-) Lock	30-pin white connector	29	Red
	(-) Unlock	30-pin white connector	2	Lt. Green
	(-) Horn	56-pin white connector at dash fuse box	49	Lt. Green
	HS CAN High	OBDII	6	Black
	HS CAN Low	OBDII	14	White
	(-) SLP	7-pin black steering lock connector	4	Yellow
	(-) PTS	10-pin black engine start/stop switch	5	Lt. Green
	Autolight	30-pin white connector	8	Green
<b>NX300h (Smart Key) 2015</b>	(-) Lock	30-pin white connector at main body ECU	29	Red
	(-) Unlock	30-pin white connector at main body ECU	2	Lt. Green
	(-) Horn	56-pin white connector at dash fuse box	49	Lt. Green
	HS CAN High	OBDII	6	Black
	HS CAN Low	OBDII	14	White
	(-) SLP	7-pin black steering lock connector	4	Yellow
	(-) PTS	10-pin black engine start/stop switch	5	Lt. Green
	Autolight	30-pin white connector at main body ECU	8	Green
<b>RC350 Smart Key 2015</b>	(-) Lock	30-pin white connector at main body ECU	29	Blue
	(-) Unlock	30-pin white connector at main body ECU	2	Lt. Green
	(-) Horn	32-pin white connector at dash fuse box	24	Blue
	HS CAN High	OBDII	6	White
	HS CAN Low	OBDII	14	Black
	(-) SLP	7-pin black steering lock connector	4	Red
	(-) PTS	10-pin black engine start/stop switch	5	Gray
	Autolight	30-pin white connector at main body ECU	8	Pink
<b>RC F Smart Key 2015</b>	(-) Lock	30-pin white connector at main body ECU	29	Blue
	(-) Unlock	30-pin white connector at main body ECU	2	Lt. Green
	(-) Horn	32-pin white connector at dash fuse box	24	Blue
	HS CAN High	OBDII	6	White
	HS CAN Low	OBDII	14	Black
	(-) SLP	7-pin black steering lock connector	4	Red
	(-) PTS	10-pin black engine start/stop switch	5	Gray
	Autolight	30-pin white connector at main body ECU	8	Pink



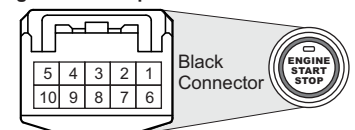
32-pin White Connector  
(located in the dash fuse box)



7-pin Black  
Steering Lock Connector



10-pin Black  
Engine Start/Stop Switch

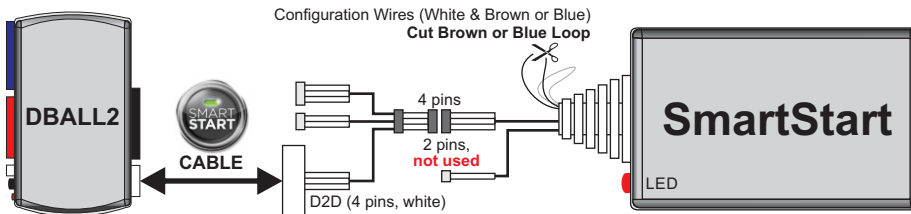


## SmartStart/XL202 Installation Notes

The DBALL Remote Start Ready (RSR) solution offers three (3) configuration options to control your system: 3x OEM Lock Remote Start Activation, RF Kits or SmartStart (all sold separately). This section provides specific installation information for SmartStart and XL202.

### SmartStart Revision A

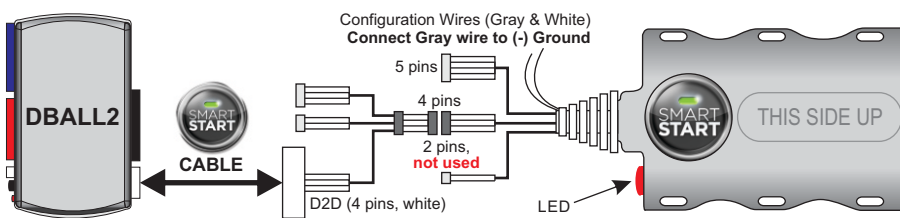
SmartStart is **optional** and not included. It **MUST** be purchased separately.



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

### SmartStart Revision B

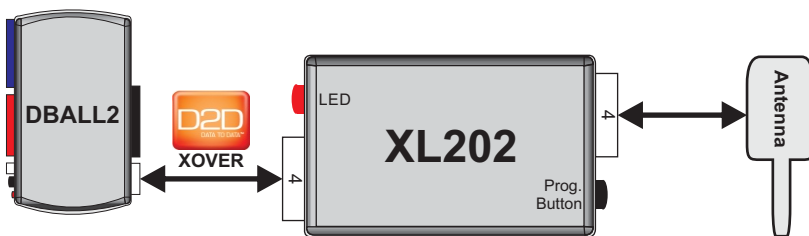
SmartStart is **optional** and not included. It **MUST** be purchased separately.



**!** 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 DBALL2 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

 Refer to the LED Diagnostics section on page 12 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 DBALL2, 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](http://www.directechs.com) to download the latest version of the application.

**Warning!** To take advantage of advanced features, you must use XpressVIP 4.5 (and higher) or the Directechs Mobile app.


#### Flashing a module using your computer:

1. Connect the interface module to your computer using the XKLoader2.
2. Go to [www.directechs.com](http://www.directechs.com) using Internet Explorer, and select the **Config for RSR** button.
3. Follow the instructions to select your vehicle, installation type, and configure your options.
4. Once you have configured the firmware options, click on the **FLASH** button.

#### Flashing a module using your smartphone or tablet

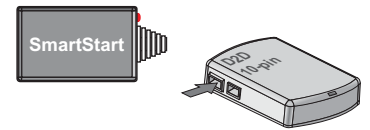
1. Connect the interface module to your XKLoader3.
2. Launch the Directechs Mobile app on your smartphone or tablet.
3. Select **FLASH YOUR MODULE** and follow the on screen instructions.

#### SmartStart Installation

 The DBALL2 module **must** be disconnected from any power source before SmartStart can be connected to it. Failing to do so could damage DBALL2.

- a. To ensure that the D2D communication between SmartStart and DBALL2 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 DBALL2 D2D connector.

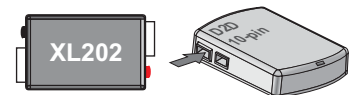
Connect SmartStart to DBALL2 using the D2D port.



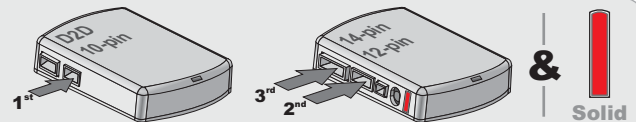
**OR**

#### XL202 Installation

Connect XL202 to DBALL2 using the D2D port.



- 1** Connect the 10-pin, 12-pin and 14-pin harnesses to DBALL2, then wait until the LED turns ON solid red.



- 2** Press the Push-to-Start (PTS) button twice to turn the ignition ON. The green LED turns ON for 3 seconds.



- 3** Press the PTS button once more to turn the ignition OFF.

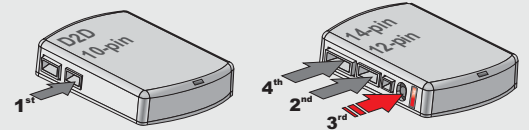


You have successfully completed the module programming sequence.

## 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 config 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.

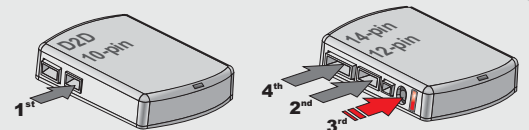


## Hard Reset

### 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

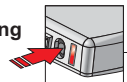
It is recommended to configure all the features and options listed below using the configuration tool found on the module flashing page on [www.directechs.com](http://www.directechs.com). The web offers more options such as EIPS and RSR; however, manual configuration of the features is possible using the information on this page.

\* Default Option

Feat.	Operation	Flashes/Option	Description
1	RFTD Output Type	1. No RF Output*	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 when the button is first pressed, and unlocks all doors when it is pressed a second time within 5 seconds.
		2. All	Unlocks all doors when the button is first pressed.
3	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.
4	Motorized Hatch Equipped	1. Not Equipped*	The vehicle is not equipped with an automatic trunk/hatch opening system.
		2. Equipped	The vehicle is equipped with an automatic trunk/hatch opening system.

## 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. When installing the DBALL in RSR using 3x OEM Lock Remote Start Activation only, there is no aftermarket transmitter on which to press lock/unlock to change the options of the selected feature. Tapping the green or blue lock/unlock wires on the black 10-pin harness to ground will change the option for 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	Description	Troubleshooting
<b>Module programming - Firmware specific</b>		
 Off	Module has no power.	Make sure the D2D harness is connected, that the red wire tests as 12V, and the black wire tests as ground. If the 12 Volt is present, the module may be defective.
 Solid red	Waiting to begin the programming sequence.	Make sure that all the connections are correct (see installation diagram).
 Flashes green & red	Initialisation failed.	If a second attempt fails after a complete Hard Reset, connect the module to Directechs.com and call Tech Support with the module ID in hand.
 Flashes green	CAN bus detected	CAN bus detected but the bypass have not been programed yet.
 Flashes orange	OEM remote starter detected.	If the user wants to use the module just as convenience he should skip bypass (press 5x programming button). If the user wants to use the module as a remote starter he should disconnect OEM remote starter and repeat the programming sequence.
 Solid green x3 sec	Module programmed successfully.	Normal operation
 Solid orange x3 sec	Module programmed successfully without bypass.	Normal operation.
<b>External Module Synchronisation</b>		
 Flashes red, red, orange	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.
<b>Active ground while running</b>		
 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 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 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.
<b>D2D and W2W commands</b>		
 Flashes orange x1	LOCK command received.	If the bypass module fails to flash, it means the module did not receive the signal. Commands can come from RF, D2D or W2W.
 Flashes orange x2	UNLOCK command received.	
 Flashes orange x3	TRUNK command received.	
<b>RSR Code</b>		
 Flashes red x 7	RFTD disabled	3x OEM Lock Remote Start Activation was attempted when RFTD feature is disabled.

## 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](http://www.directed.com)

920-10012-01 2013-07

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.

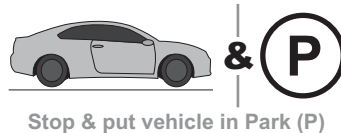
## Vehicle Takeover

**Note:** There is no vehicle takeover in this firmware. The vehicle will shut down as soon as a door is opened.

## 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.

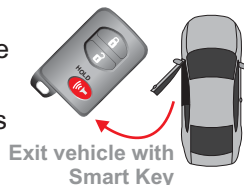
- 1** Stop the vehicle in a safe parking spot and put the gear in Park (P).



- 2** Press the button to remote start the vehicle.\*



- 3** It is now safe to leave the engine running and exit the vehicle with the factory remote 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.

## 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.

## 3x OEM Lock Remote Start Activation

This solution includes the option to remote start your vehicle by pressing the Lock button 3 times consecutively. If your vehicle allows the OEM remote to remain active while the engine is running, you may shut down your remote starter by pressing the Lock button 3 times once more.

**Note:** The range offered by OEM remotes is limited and typically requires you to be within eyesight of the vehicle to control it.

## 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.



## 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).*
$f$ x3 + 	Press $f$ 3 times, then  to activate the panic mode.
$f$ x1 + 	Press $f$ once, then  to reset the remote starter runtime.

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

## SmartStart Compatible



This system is compatible with Directed SmartStart 3.0. For a complete list of supported features, please visit [www.mysmartstart.com](http://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](http://www.mysmartstart.com).



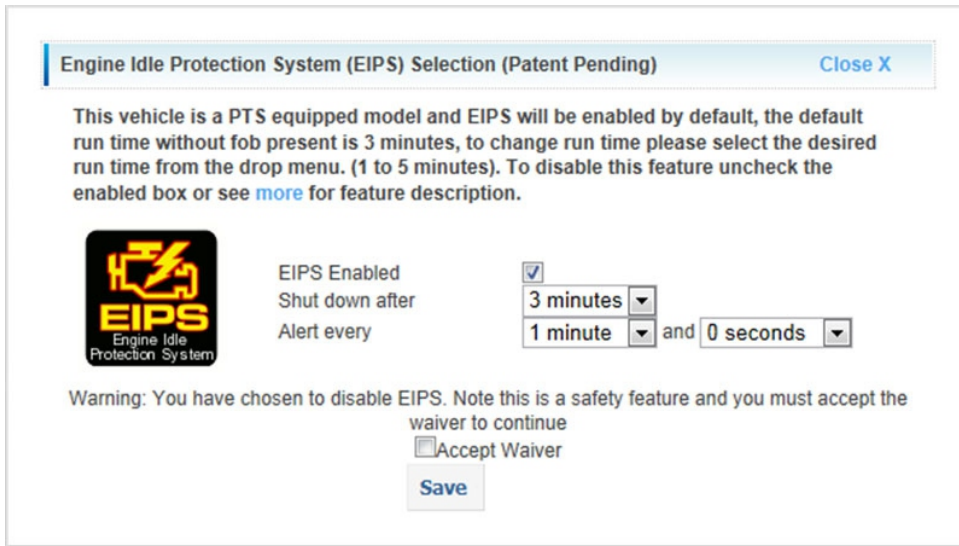
## Engine Idle Protection System (EIPS)

Vehicles equipped with RFID-type Push-to-Start ignition systems work by detecting a proximity key in the vehicle. They will run indefinitely if the key is removed, which could potentially lead users to exiting the vehicle while the engine is still running and the car is left idling on its own in a garage or a confined space.

To mitigate risk, we have designed a feature that is now available on the DBALL. It will detect the presence of the RFID fob in the vehicle, through the CAN bus. If left idling for more than the pre-defined runtime (i.e. 1 to 5 minutes) without detecting the fob, DBALL will send a signal to the vehicle in order to shut off the engine.

EIPS (Engine Idle Protection System) will:

- Notify the user about the idling engine by sounding the horn with a series of short beeps.
- Shut down the engine after a pre-defined period of time (i.e. 1 to 5 minutes). EIPS is configured using XpressVIP. The following window is displayed whenever a DBALL module is flashed.



- If the engine fails to shut down due to some malfunction, EIPS will go into alarm mode and will notify the user by all means possible (e.g. horn or siren).

Activating/deactivating EIPS:

- To activate EIPS, remove all keys from the vehicle and close all doors while the engine is running.
  - To deactivate EIPS, do one of the following actions:
    - Open one of the doors.
    - Remote start the vehicle.
    - Turn the engine off.
    - Drive the vehicle.\*
- \* The EIPS feature is disabled if the vehicle is in motion so there is no risk that the vehicle will shut off while driving, regardless of the fob being present in the vehicle or not.

## Notes

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