



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

Door lock and key interface compatible with Mazda vehicles.



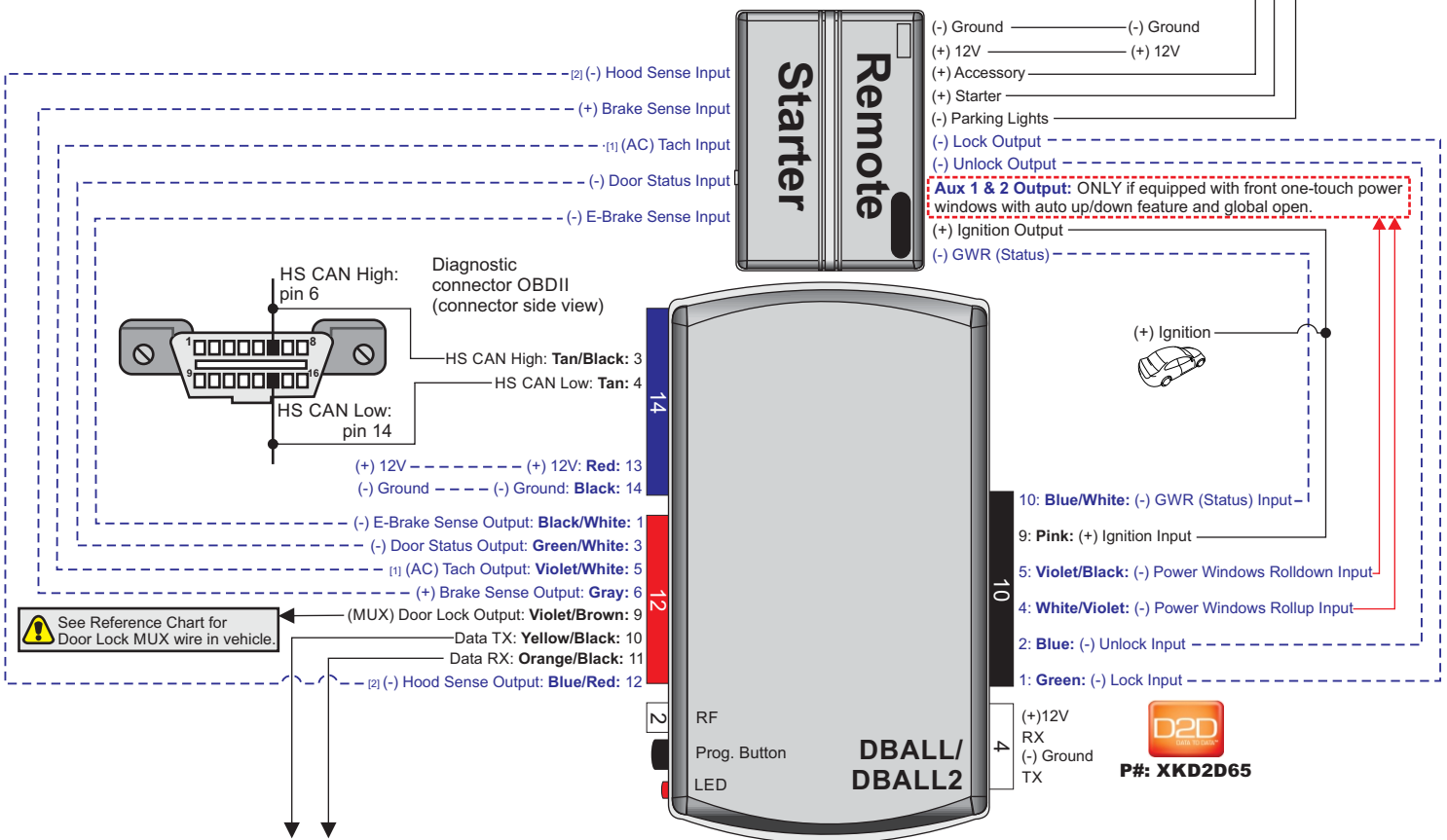
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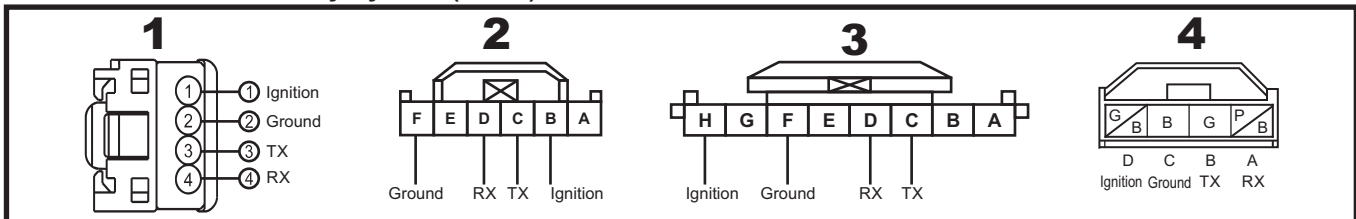
Installation Type 1

Vehicle	Year	PATS Connector	Door Lock MUX Wire Color	Location for Door Lock MUX Wire	Connector / Harness for Door Lock MUX Wire
Mazda 2 (WO/Alarm)	2011-2014	2	Pink	Gray 24 pin plug	BCM behind glove box
Mazda 2 (W/Alarm)			Green	Gray 24 pin plug	BCM behind glove box
Mazda 3 (WO/Alarm)	2010-2013	1	Lt.Green	White 24 pin plug	BCM in Driver kick panel
Mazda 3 (W/Alarm)			Green	White 24 pin plug	BCM in Driver kick panel
Mazda 5 (WO/Alarm)	2012-2015	4	Blue	Harness in driver kick panel	
Mazda 5 (W/Alarm)					
Mazda 6 (WO/Alarm)	2009-2013	3	Black/White	White 16 pin plug	BCM in Driver kick panel
Mazda 6 (W/Alarm)			Black	White 16 pin plug	BCM in Driver kick panel
Atenza (WO/Alarm)	2009-2013	3	Black/White	White 16 pin plug	BCM in Driver kick panel
Atenza (W/Alarm)			Black	White 16 pin plug	BCM in Driver kick panel
Axela (WO/Alarm)	2010-2013	1	Lt.Green	White 24 pin plug	BCM in Driver kick panel
Axela (W/Alarm)			Green	White 24 pin plug	BCM in Driver kick panel
CX-7 (WO/Alarm)	2011-2012	1	Lt.Green/Red	White 30 pin plug	BCM in Driver kick panel
CX-7 (W/Alarm)			Black/White	White 30 pin plug	BCM in Driver kick panel
CX-9 (WO/Alarm)	2011-2014	1	Violet/White	White 30 pin plug	BCM in Driver kick panel
CX-9 (W/Alarm)			Lt.Green	White 30 pin plug	BCM in Driver kick panel


Connect to vehicle
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Passive Anti-Theft Security System (PATS) connectors



----- Not required in D2D mode.

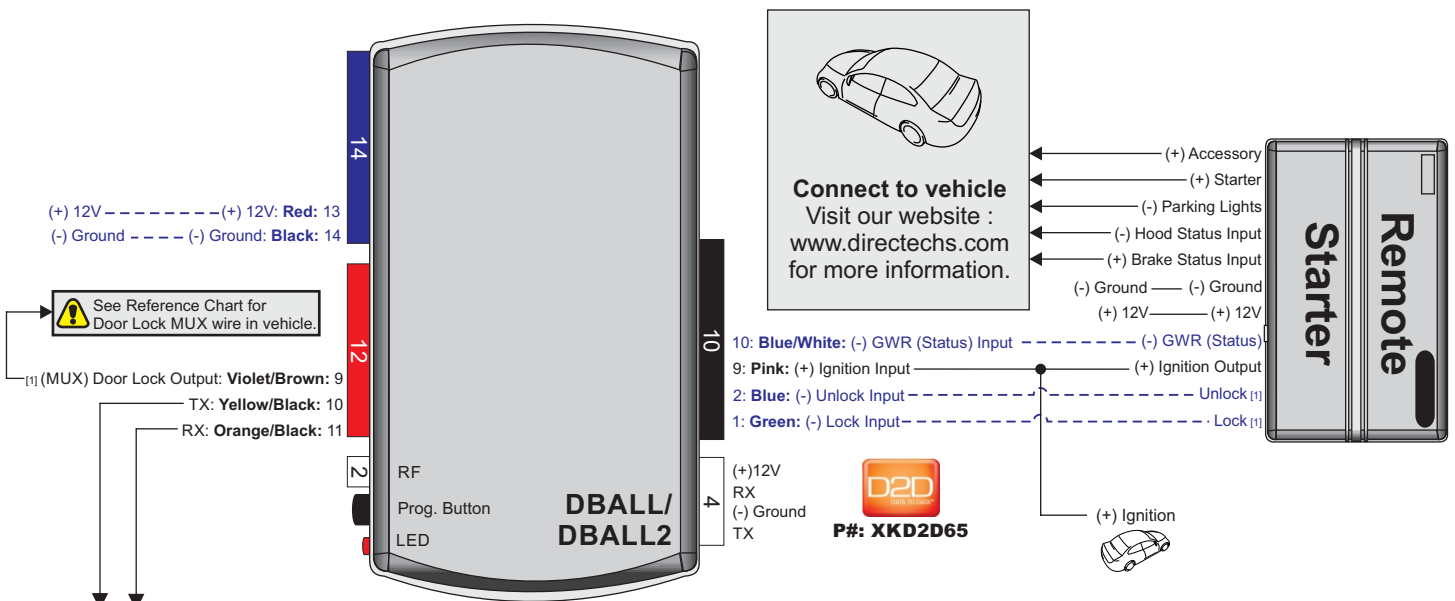
[1] Tach wire is an optional connection required on some remote starters, which do not support a tach signal in D2D.

[2] Only if vehicle is equipped with OEM hood pin.

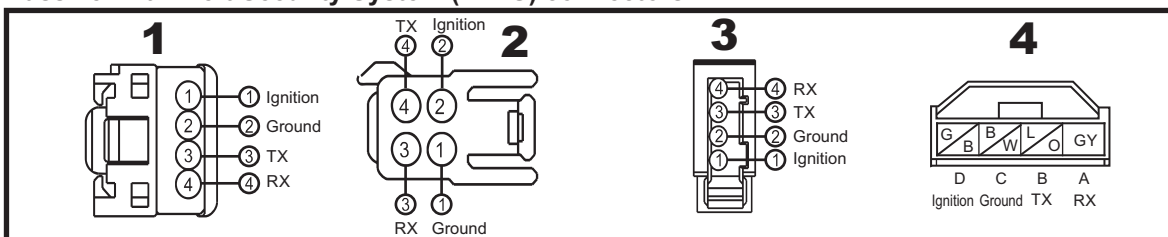
 With the exception of the OBDII Diagnostic connector, all adapters are displayed from the wire side (unless specified otherwise).

Installation Type 2

Vehicle	Year	PATS Connector	MUX Door Lock Wire		
			Color	Location	Connector
Mazda 3	2004-2009	2	Green/Red	<i>Harness in driver kick panel</i>	N/A
Mazda Speed3	2006-2009	2	Green/Red	<i>Harness in driver kick panel</i>	N/A
Mazda 5	2006-2010	4	Blue	<i>Harness in driver kick panel</i>	N/A
Mazda 6	2003-2005	2	Lt.Green	<i>Harness in driver kick panel</i>	N/A
Mazda 6	2006-2008	2	Lt.Green	BCM in Driver kick panel	24 pin plug
Mazda Speed6	2006-2008	2	Lt.Green	BCM in Driver kick panel	25 pin plug
Atenza	2003-2005	2	Lt.Green	<i>Harness in driver kick panel</i>	N/A
Atenza	2006-2008	2	Lt.Green	BCM in Driver kick panel	24 pin plug
Axela	2004-2009	2	Green/Red	<i>Harness in driver kick panel</i>	N/A
B-Series	2002-2009	2	N/A	N/A	N/A
CX-7 (WO/Alarm)	2007-2010	2	Lt.Green/Red	BCM in Driver kick panel	White 30 pin plug
CX-7 (W/Alarm)		2	Black/White	BCM in Driver kick panel	White 30 pin plug
CX-9 (WO/Alarm)	2007-2010	2	Violet/White	BCM in Driver kick panel	White 30 pin plug
CX-9 (W/Alarm)		2	Lt.Green	BCM in Driver kick panel	White 30 pin plug
MX-5 (WO/Alarm)	2006-2014	2	Brown/White	Keyless Control Module above driver kick panel	Gray 27 pin plug
MX-5 (W/Alarm)		2	Gray/Red	Keyless Control Module above driver kick panel	Gray 27 pin plug
Premacy	2006-2010	4	Blue	<i>Harness in driver kick panel</i>	N/A
Roadster (WO/Alarm)	2006-2010	2	Brown/White	Keyless Control Module above driver kick panel	Gray 27 pin plug
Roadster (W/Alarm)		2	Gray/Red	Keyless Control Module above driver kick panel	Gray 27 pin plug
RX-8 (WO/Alarm)	2004-2011	2	Lt.Green	<i>Harness from driver door</i>	N/A
RX-8 (W/Alarm)	2004-2011	2	Green/Red	<i>Harness from driver door</i>	N/A
Tribute	2005-2006	3	N/A	N/A	N/A
Tribute	2008-2011	1	N/A	N/A	N/A




Passive Anti-Theft Security System (PATS) connectors



----- Not required in D2D mode.


[1] Do NOT use on Mazda B-Series and Mazda Tribute. Hard wire lock and unlock from remote starter directly to the vehicle.

Module Programming

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

Important

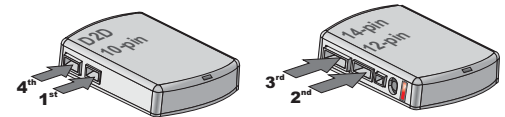
Make all the required connections to the vehicle, as described in the wiring diagram(s) found in this guide, and double check to ensure everything is correct prior to moving onto the next step.

 **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 right 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 **Flash 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.

D2D Installation

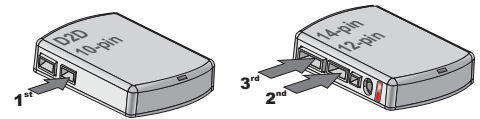
If required for your installation, connect the 10-pin, 12-pin and 14-pin harnesses to the module, then connect the 4-pin D2D harness.



OR

W2W Installation

If required for your installation, connect the 10-pin and 12-pin harnesses to the module, then connect the 14-pin harness to the module.




- 1 Wait until the LED turns ON solid red.



Go to the next page to complete the module programming. 

Method 1 (using 1 key and Key2GO) - Recommended Method

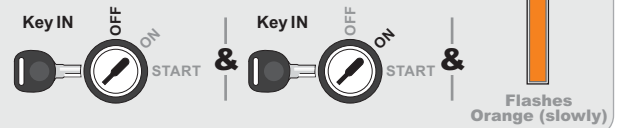
 Refer to the LED Diagnostics section for more information and for troubleshooting purposes.
Version 4.5 or higher of XpressVIP must be installed on your computer to complete this programming sequence.

Step 1: Please see page 5.

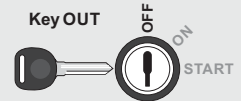
2 Insert the key into the ignition barrel and turn it to the ON position. The LED flashes green.



3 Turn the key to OFF position then turn it to the ON position again. The LED flashes orange slowly.



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



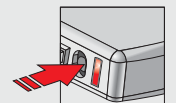
5 Remove the DBALL/DBALL2 from the vehicle and reconnect it to your computer. The Directechs web site will automatically recognize that you are moving on to the second phase of the programming sequence.

6 Select the method and click on **Submit Key2GO Request**.

7 Once the configuration is completed, reconnect the DBALL/DBALL2 to the vehicle. The LED flashes orange.



8 **Type 2 ONLY** (No CAN connection):
Press 5 times on the programming button.

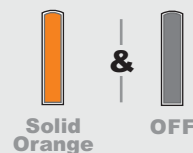


Press x 5

Type 1: The LED turns ON solid green, then turns OFF once the module has been successfully programmed.



Type 2: The LED turns ON solid orange for 3 seconds, then turns OFF once the module has been successfully programmed.



You have successfully completed the module programming sequence.

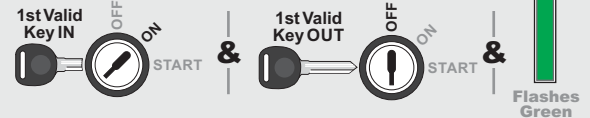
Method 2 (using 2 keys)

! Refer to the LED Diagnostics section for more information and for troubleshooting purposes.
Version 4.5 or higher of XpressVIP must be installed on your computer to complete this programming sequence.

Step 1: Please see page 5.

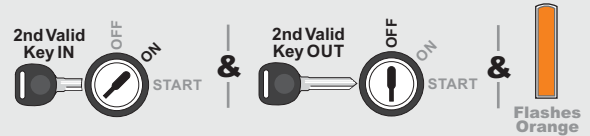
Important: Make sure all doors are closed on the vehicle before executing the programming sequence.

2 Insert the first key and turn it to the ON position, wait until the security light turns OFF, then remove it. The LED flashes green.



Within 3 seconds but no more than 10 seconds (if exceeded, restart programming at step 1, see page 5):

3 Insert the second key and turn it to the ON position, wait until the security light turns OFF, then remove it. The LED flashes orange.



Within 3 seconds but no more than 10 seconds (if exceeded, restart programming at step 1, see page 5):

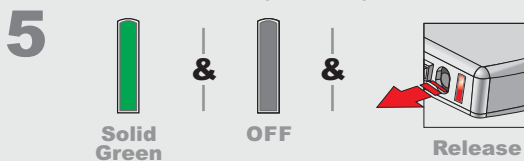
4 **Automatic Transmission:**
Press & hold the module programming button and then remote start the vehicle using the transmitter (keep holding the programming button).



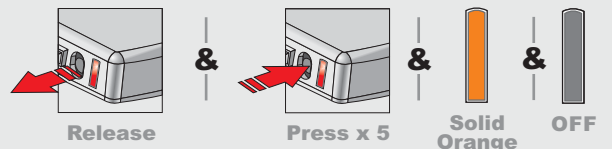
OR
Manual Transmission:
Press & hold the module programming button and then apply (+)12V to the vehicle ignition wire with a jumper wire (keep holding the programming button).



Type 1: The LED turns ON solid green for 3 seconds, then turns OFF once the module has been successfully programmed.
Release the programming button.



Type 2: The LED turns ON solid orange for 3 seconds, then turns OFF once the module has been successfully programmed.



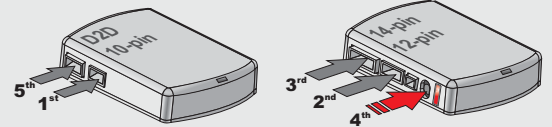
You have successfully completed the module programming sequence.

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.

D2D Installation

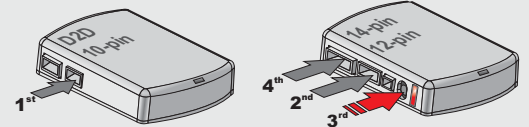
If required for your installation, connect the 10-pin, 12-pin & 14-pin harnesses to the module. Press and hold the programming button, then connect the 4-pin D2D harness.



1 **OR**

W2W Installation

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 then turns ON solid red.



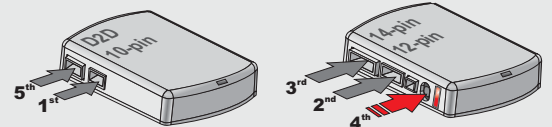
Hard Reset

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.

D2D Installation

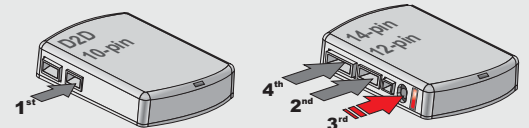
If required for your installation, connect the 10-pin, 12-pin & 14-pin harnesses to the module. Press and hold the programming button, then connect the 4-pin D2D harness.



1 **OR**

W2W Installation

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

Feat.	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	Automatic Controlled Door Lock	1. Disabled*	No operation.
		2. With Ignition	Locks all doors when ignition is ON. Unlocks all doors when ignition turns OFF.
		3. With Brake	Locks all doors when brake pedal is pressed while the vehicle is running. Unlocks all doors when ignition turns OFF.
		4. With Speed	Not available
4	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. Normal	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	Description	Troubleshooting	Comment
Module programming			
 Solid red	Module has power. Waiting for CAN.	Normal operation	Make sure that your connections to CAN are correct and turn the ignition ON.
 Flashes green	CAN detected.	Normal operation.	Normal operation
 Flashes orange slowly	Module is waiting on 2nd key detection or Key2GO key data has been acquired.	Normal operation. Key data detected for Key2GO or waiting for 2nd key to be detected.	Normal operation
 Solid green x 3 secs	Module successfully programmed.	Normal operation	Normal operation
 Solid orange x 3 secs	Module successfully programmed without convenience (bypass only).	Normal operation	Comfort and convenience functions will not be supported.
Module programming - Error codes			
 Flashes red x2	CAN detection failed	Check the Tan - Tan/Black wire connections. Wake up the data bus by turning the ignition on and try again.	Some installation types do not need this connection. Skip by pressing the programming button 5 times.
 Flashes red x 3	2nd Key not detected	Time expired between keys. Reset the module and restart the programming method and make sure you do not exceed 10 seconds between the 2 keys.	If programming cannot be completed, please refer to Key2GO programming method.
 Flashes red x4	Bypass processing error.	Bypass calculation failed. Reset the module and try again.	Might be caused by a bad reading in the first programming attempt or by an unknown bypass value. If a second attempt fails, connect the module to Directechs and call Tech Support with the module ID in hand.
Active ground while running (status)			
 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.
 Solid red, then flashes 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.	
D2D and W2W commands			
 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.		
 Flashes orange x4	AUX1 command received.		
 Flashes orange x5	AUX2 command received.		

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











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.

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).
	Press <i>f</i> once, then  to activate the rear hatch/tail glass release (optional).*
	Press <i>f</i> 3 times, then  to activate the panic mode.
	Press <i>f</i> once, then  to reset the remote starter runtime.

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

Notes
