




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



The CHRYSLER firmware for DBALL2 is an all-in-one door lock and override module compatible with specific Chrysler, Dodge, Jeep, Mitsubishi and Volkswagen vehicles. This guide supports the installation of a DBALL2 in Remote Start Ready (RSR) mode with or without a Plug & Play (CHTHD1/THCHD1 or CHTHD2/THCHD2) T-Harness (optional). This solution offers three (3) configuration options to control your system: 3x OEM Lock Remote Start Activation, RF System or SmartStart (all sold separately).



 This module can only be flashed and configured using XpressVIP at www.directechs.com or using the Directechs Mobile application for smartphones. Refer to the Module Programming section on pages 25-26 for more information.



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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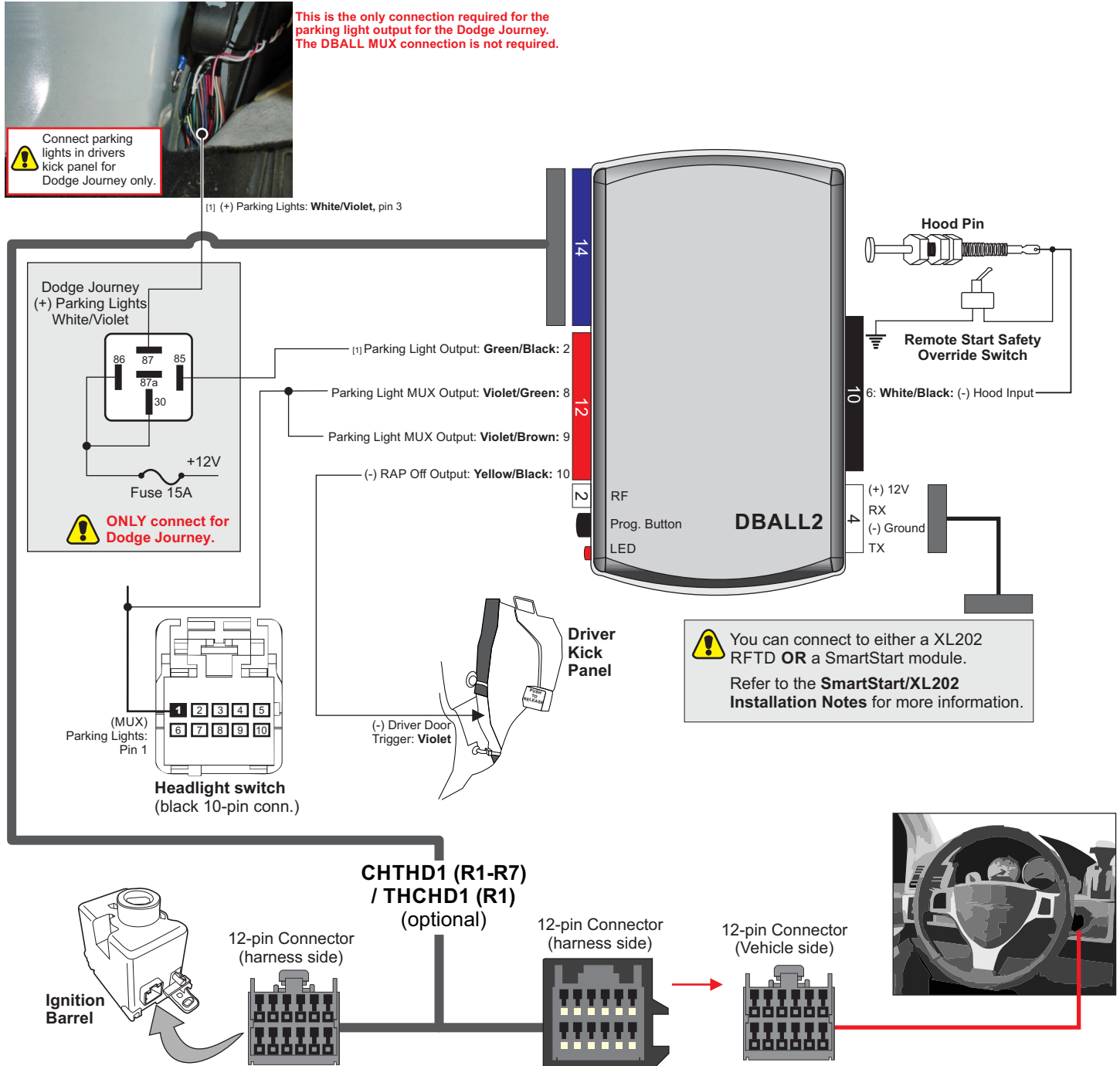
SmartStart Compatible

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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Installation Type 1 - with CHTHD1 (R1-R7) /THCHD1 (R1) T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.

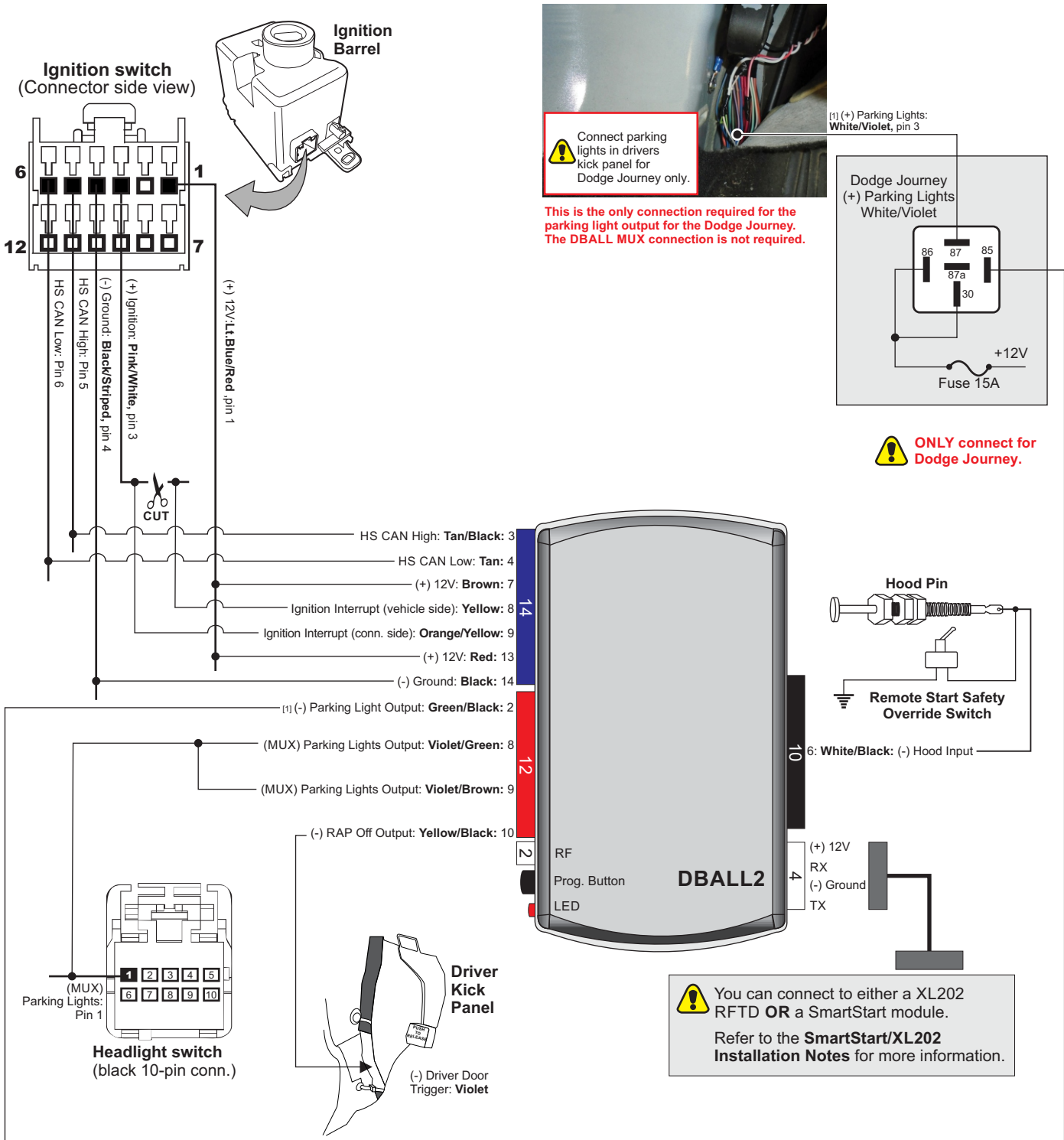


[1] Connected to the Dodge Journey only. DO NOT connect Parking Light Input to (+)12V at the ignition switch.

⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Installation Type 1 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



[1] Connected to the Dodge Journey only. DO NOT connect Parking Light Input to (+)12V at the ignition switch.

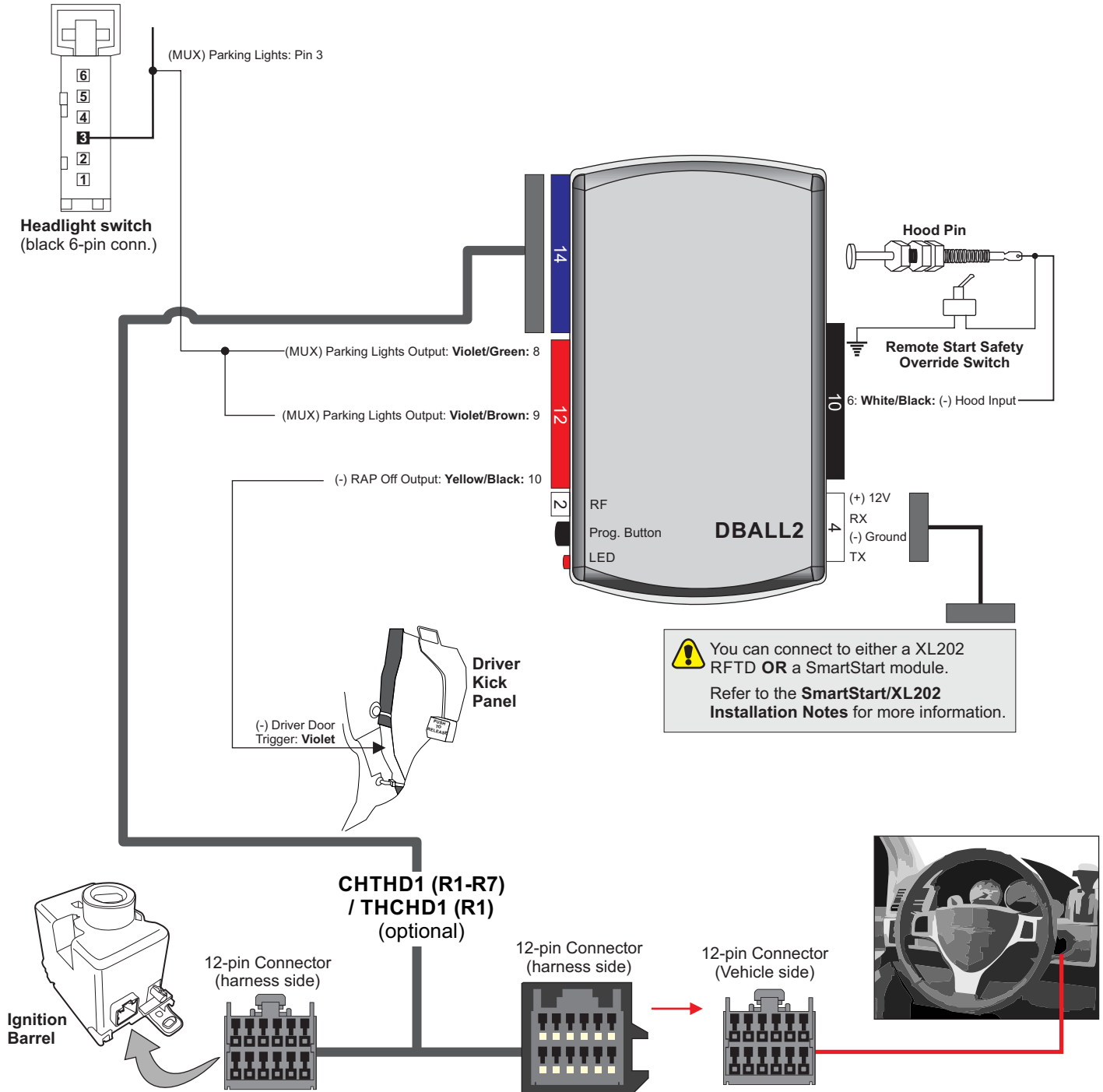
⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 1 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Chrysler Town & Country 2008-2010						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Brown	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge RAM 1500 /2500/3500 2011-2012						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge Grand Caravan 2008-2010						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Brown	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge Journey 2009-2010						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
12V Battery	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Violet	N/A	(+)	Drivers kick, harness to rear.	N/A	N/A
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge RAM 2009-2010						
HS CAN High	White/Lt.Green	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Jeep Grand Cherokee 2011-2013						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Lt.Green	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Jeep Grand Cherokee (Smart Key) 2011-2013						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Volkswagen Routan 2009-2010						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Brown	1	MUX	Headlight switch.	Black	10
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A

Installation Type 2 - with CHTHD1 (R1-R7) /THCHD1 (R1) T-Harness

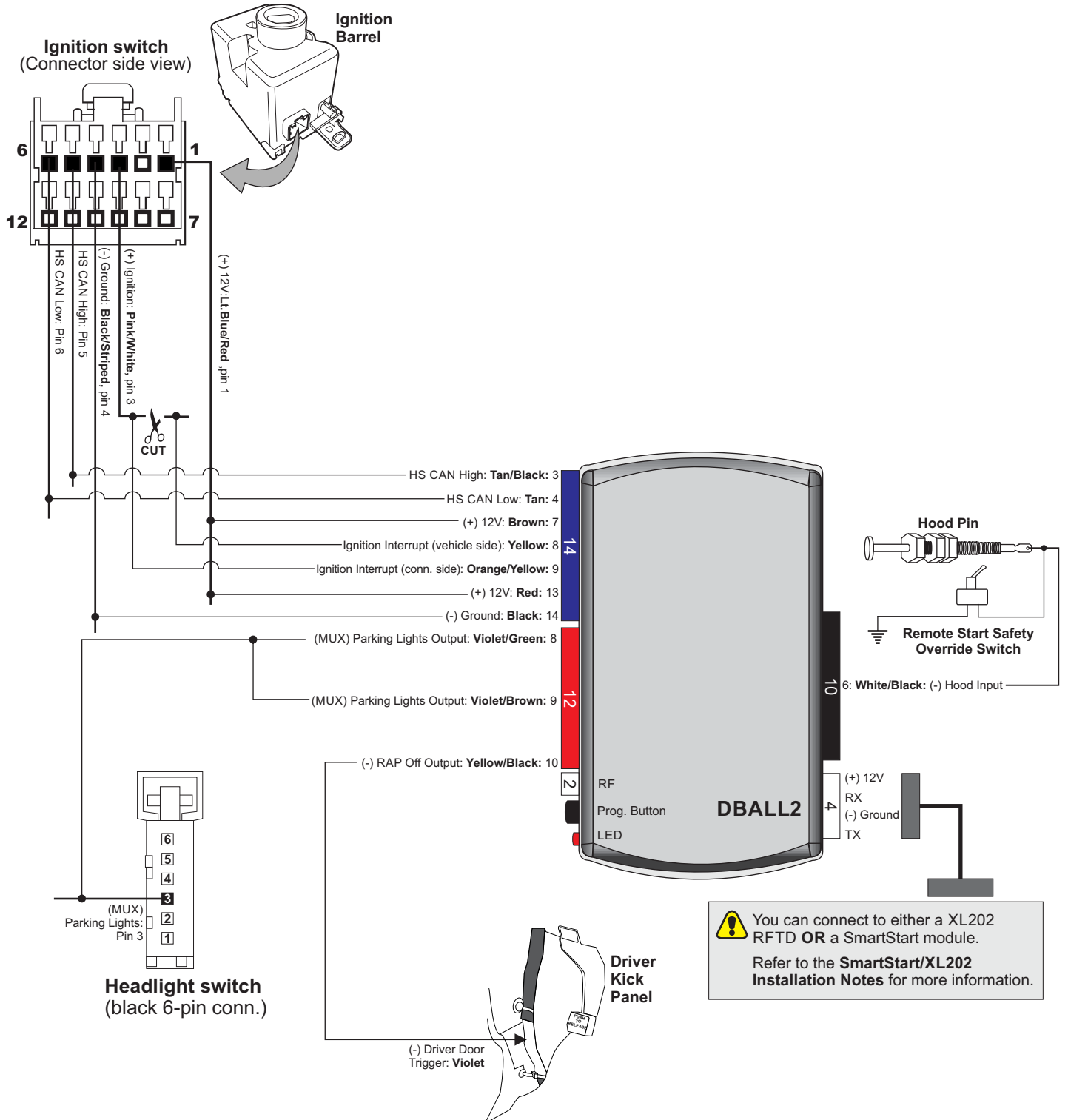
⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Installation Type 2 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



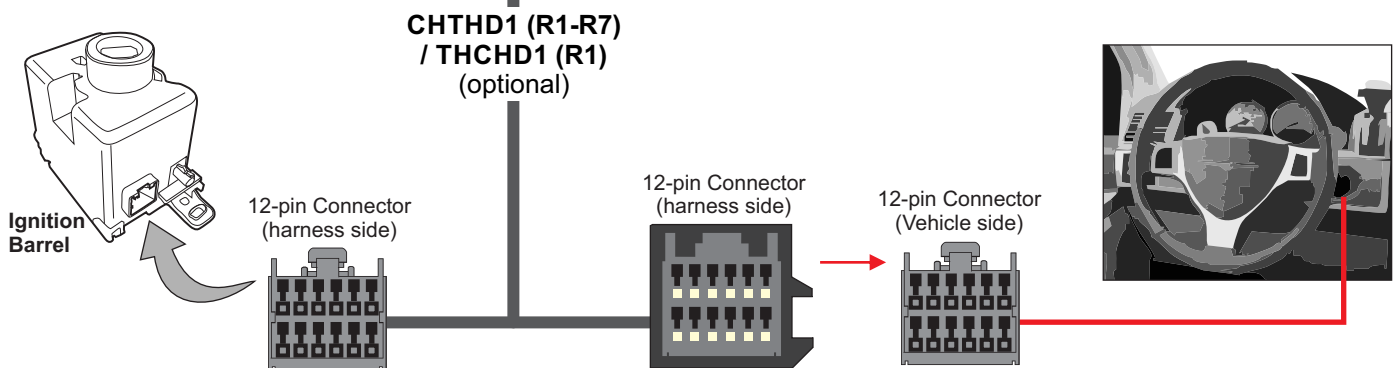
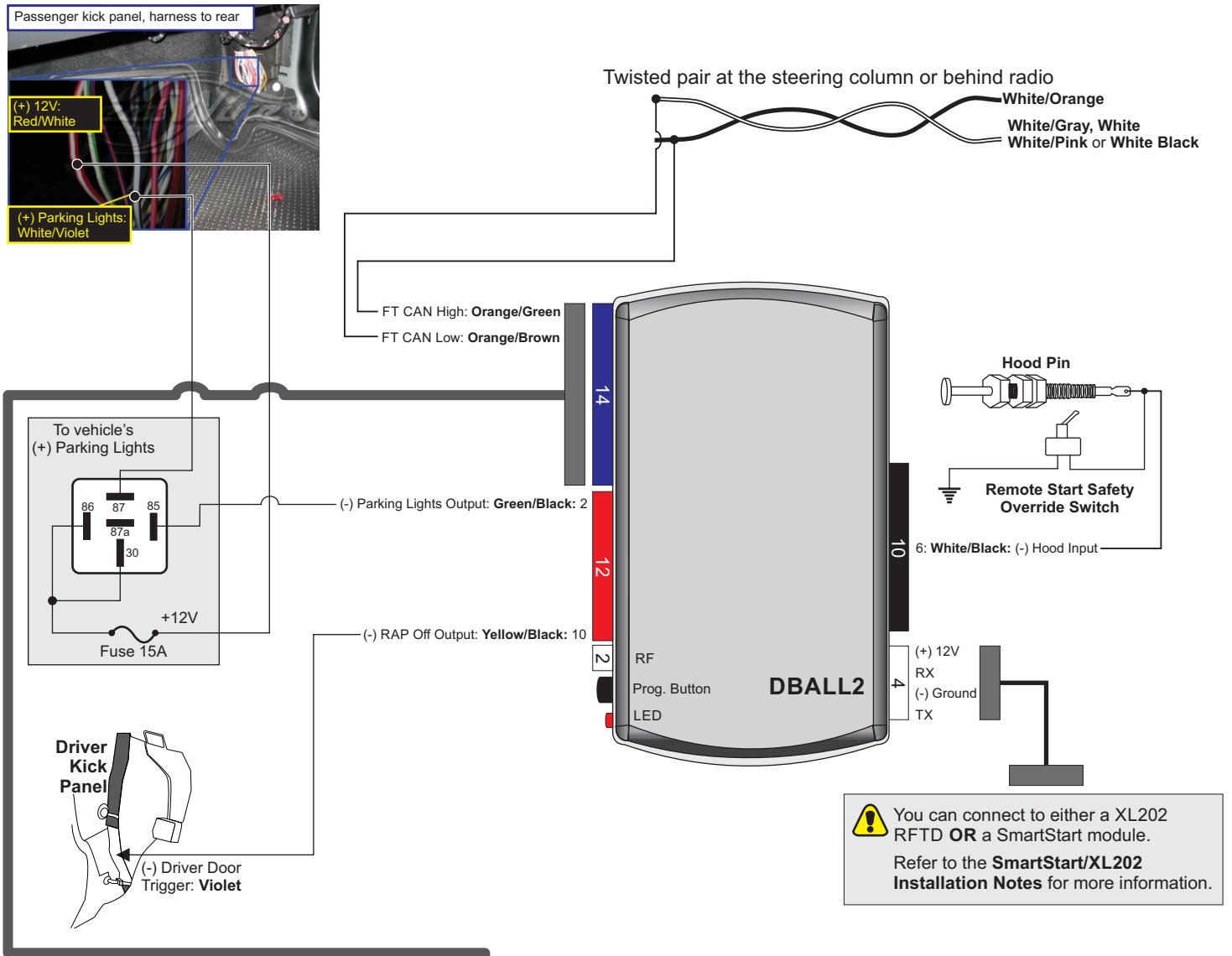
⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 2 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Chrysler Town & Country 2011-2016						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	3	MUX	Headlight switch.	Black	6
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge C/V 2012-2016						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	3	MUX	Headlight switch.	Black	6
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge Durango 2011-2013						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	3	MUX	Headlight switch.	Black	6
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Dodge Grand Caravan 2011-2017						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	3	MUX	Headlight switch.	Black	6
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A
Volkswagen Routan 2011-2013						
HS CAN High	White/Lt.Blue	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Brown	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Parking Lights	White/Green	3	MUX	Headlight switch.	Black	6
Driver Door Trigger	Violet	N/A	N/A	Drivers kick door harness.	N/A	N/A

Installation Type 3 - with CHTHD1 (R1-R7) /THCHD1 (R1) T-Harness

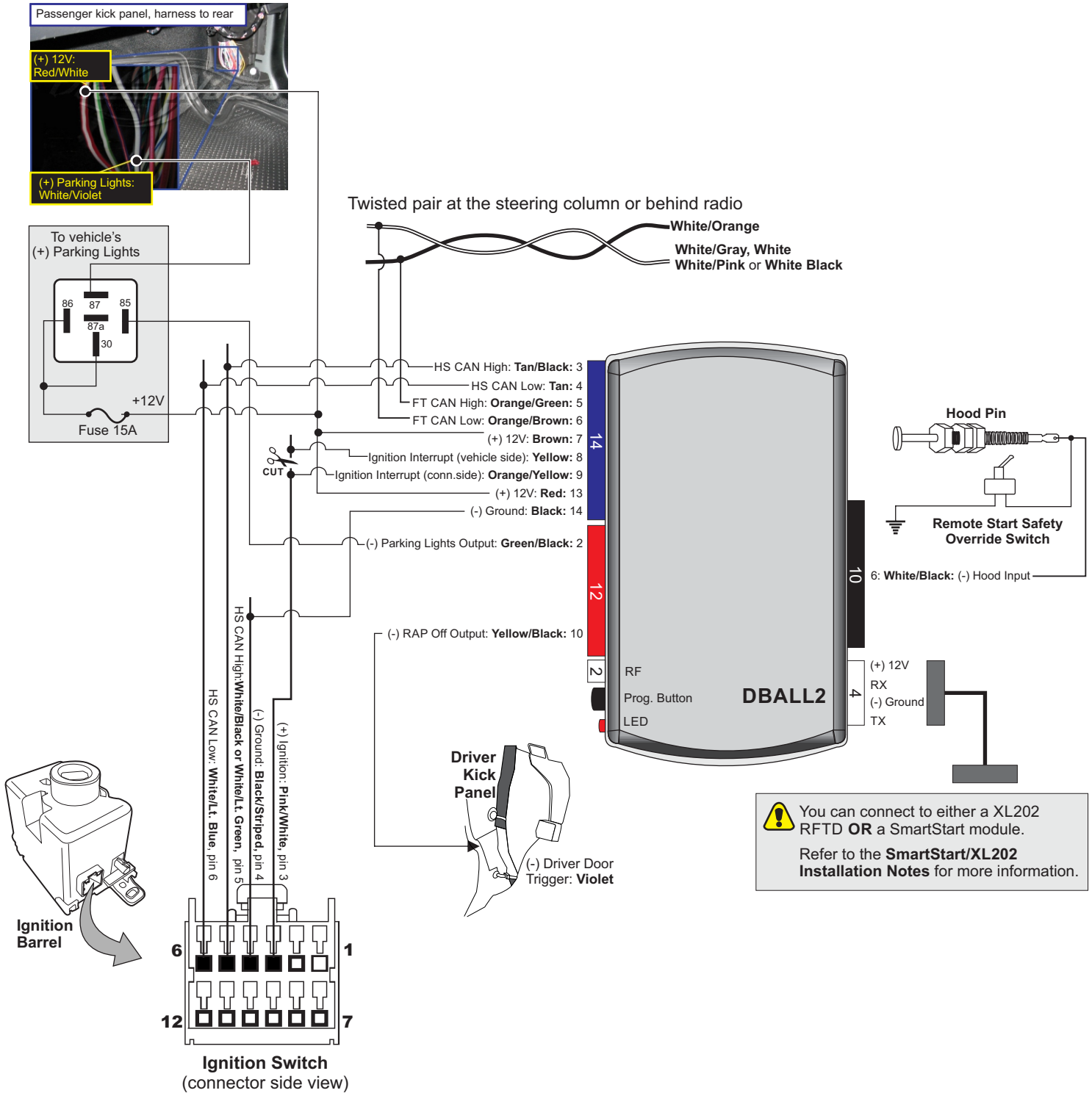
⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Installation Type 3 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



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

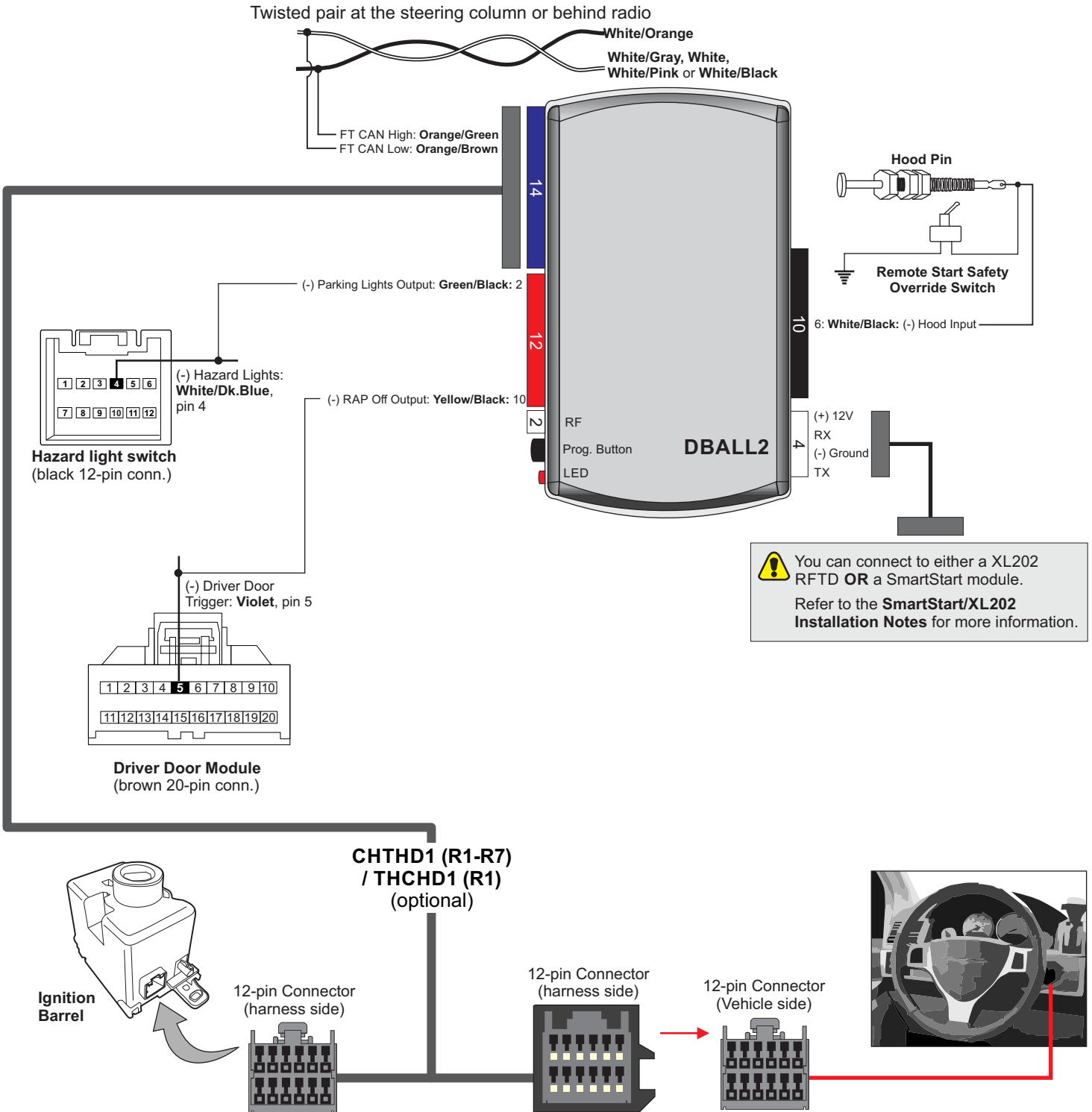
⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 3 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Chrysler 300/300c 2008-2010						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red/White	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
Parking Light	White/Violet	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	3	(-)	Instrument cluster or driver kick.	White	26
Dodge Challenger / Challenger (Smart Key) 2008-2014						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black or Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red/White	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
Parking Lights	White/Violet	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	3	(-)	Instrument cluster or driver kick.	White	26
Dodge Charger 2008-2010						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red/White	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
Parking Light	White/Violet	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	3	(-)	Instrument cluster or driver kick.	White	26
Dodge Magnum 2008						
HS CAN High	White/Black	5	Data	Wireless Ignition Node on ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Wireless Ignition Node on ignition switch.	Black	12
Ground	Black/Striped	4	(-)	Wireless Ignition Node on ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Wireless Ignition Node on ignition switch.	Black	12
12V	Red/White	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
Parking Lights	White/Violet	N/A	(+)	Passenger kick, harness to rear.	N/A	N/A
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	3	(-)	Instrument cluster or driver kick.	White	26

Installation Type 4 - with CHTHD1 (R1-R7) / THCHD1 (R1) T-Harness

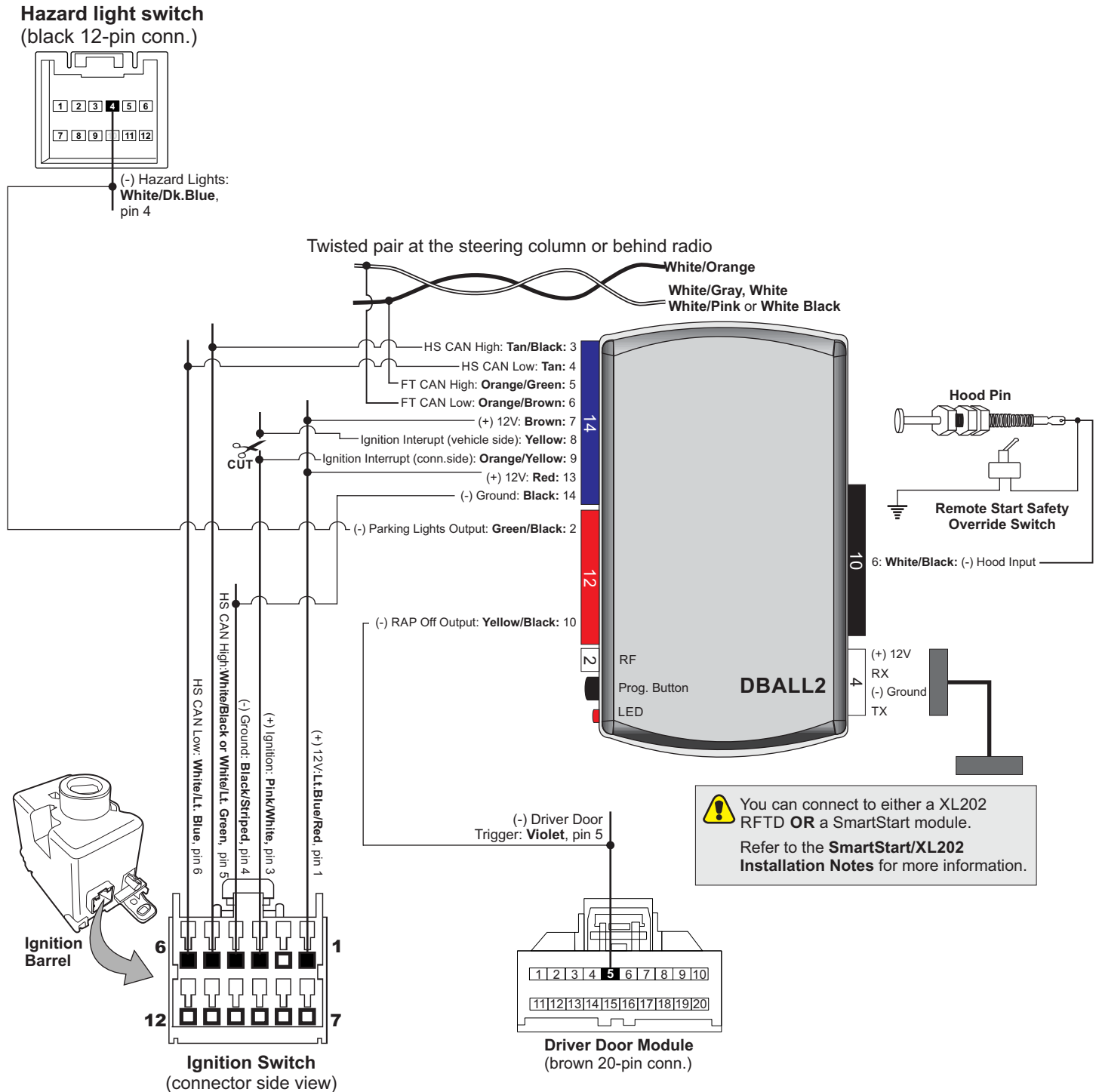
⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Installation Type 4 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



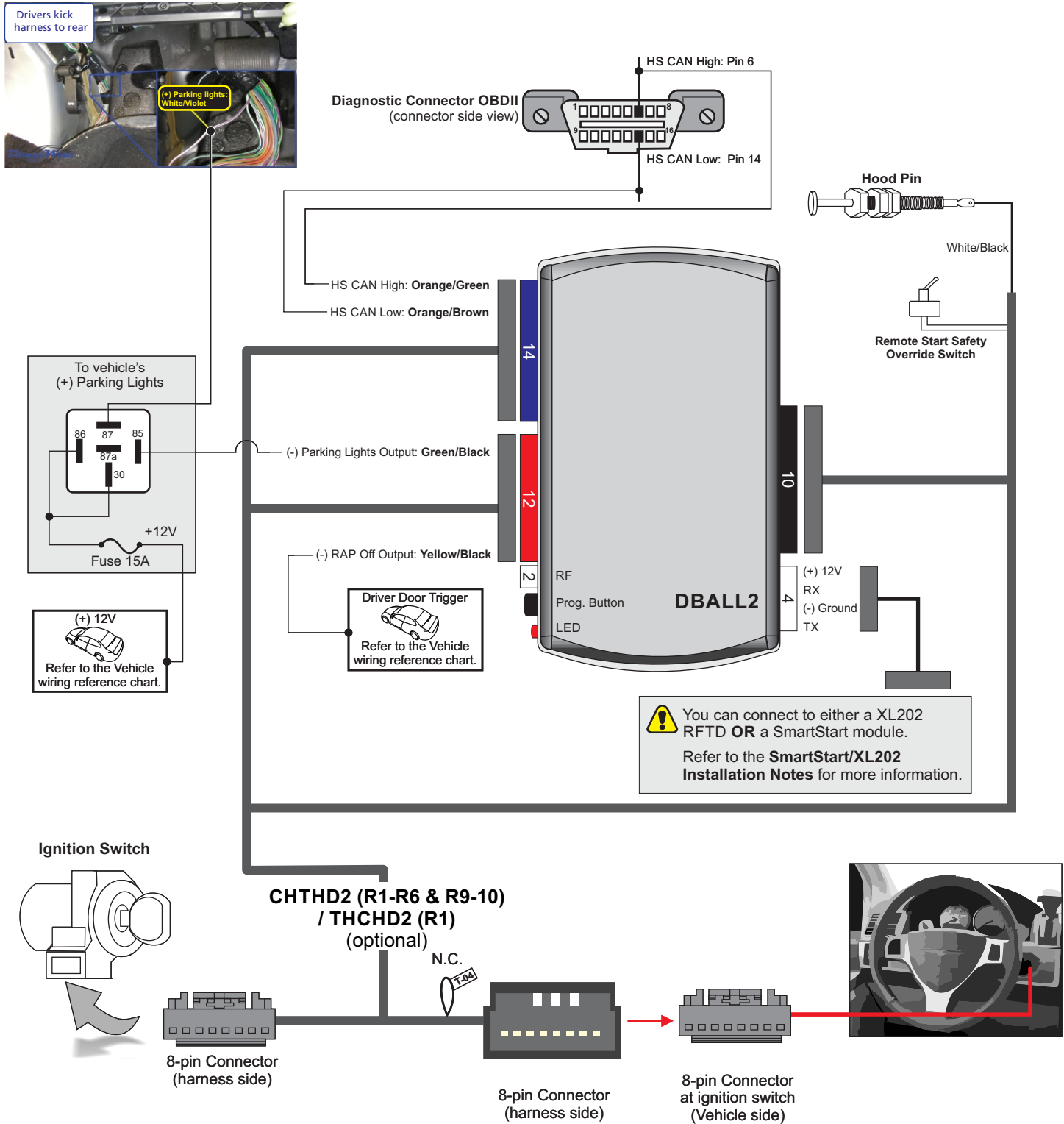
⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 4 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Jeep Commander 2008-2010						
HS CAN High	White/Lt.Green	5	Data	Ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Ignition switch.	Black	12
Ground	Black/Striped	4	(-)	Ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Ignition switch.	Black	12
Parking Light	White/Dk.Blue	4	(-)	Hazard light switch.	Black	12
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	5	(-)	Driver Door Module.	Brown	20
Jeep Grand Cherokee 2008-2010						
HS CAN High	White/Black	5	Data	Ignition switch.	Black	12
HS CAN Low	White/Lt.Blue	6	Data	Ignition switch.	Black	12
12V	Lt.Blue/Red	1	(+)	Ignition switch.	Black	12
Ground	Black/Striped	4	(-)	Ignition switch.	Black	12
Ignition	Pink/White	3	(+)	Ignition switch.	Black	12
Parking Light	White/Dk.Blue	4	(-)	Hazard light switch.	Black	12
FT CAN High	White/Orange	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
FT CAN Low	White/Gray, White or White/Pink	N/A	Data	Twisted pair at steering column or behind radio.	N/A	N/A
Driver Door Trigger	Violet	5	(-)	Driver Door Module.	Brown	20

Installation Type 5 - with CHTHD2 (R1-R6 & R9-R10) /THCHD2 (R1) T-Harness

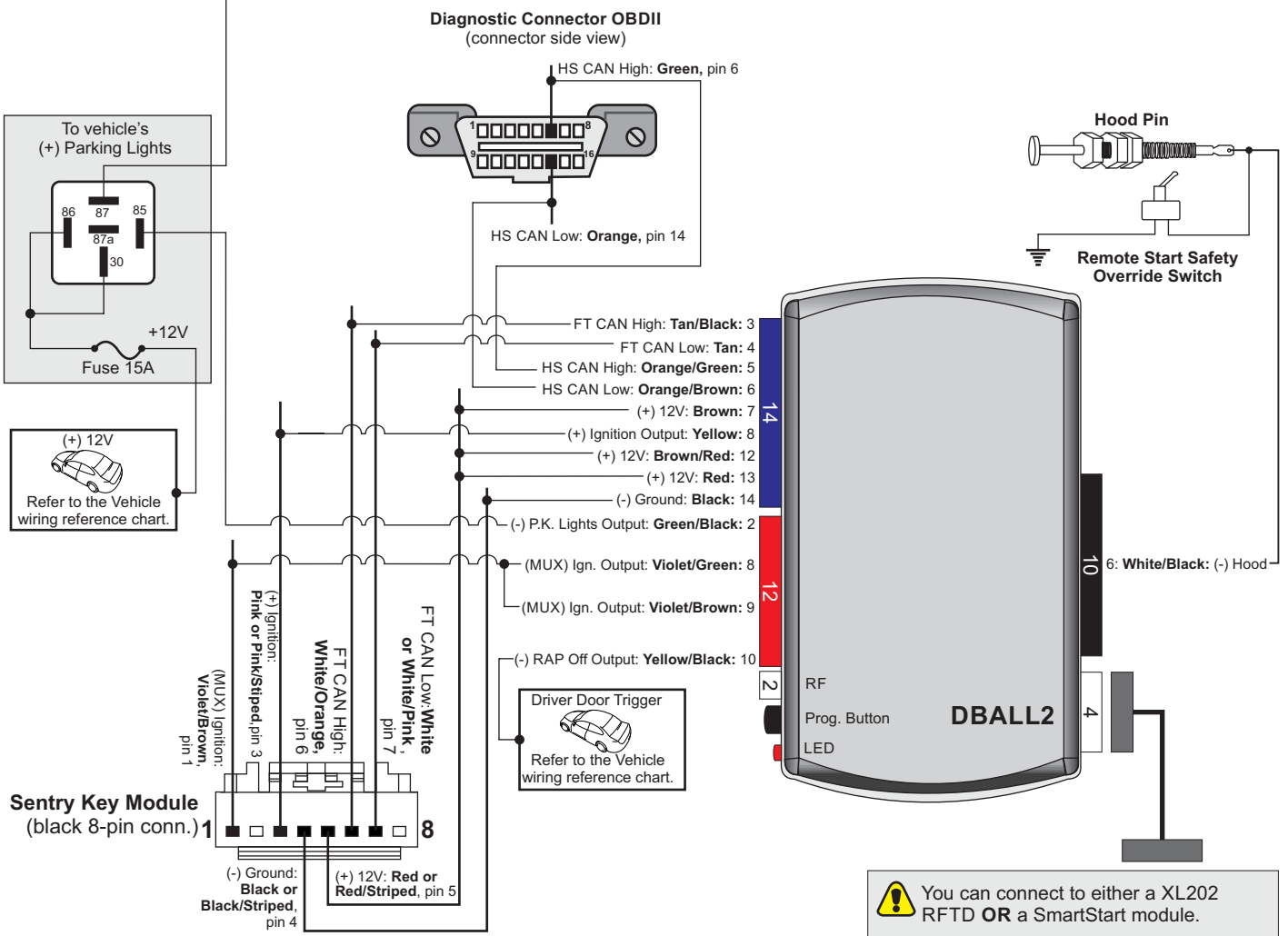
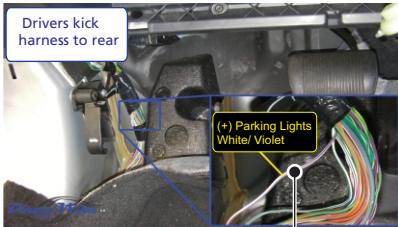
⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



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

Installation Type 5 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



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

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

Type 5 - Vehicle Wiring Reference Chart

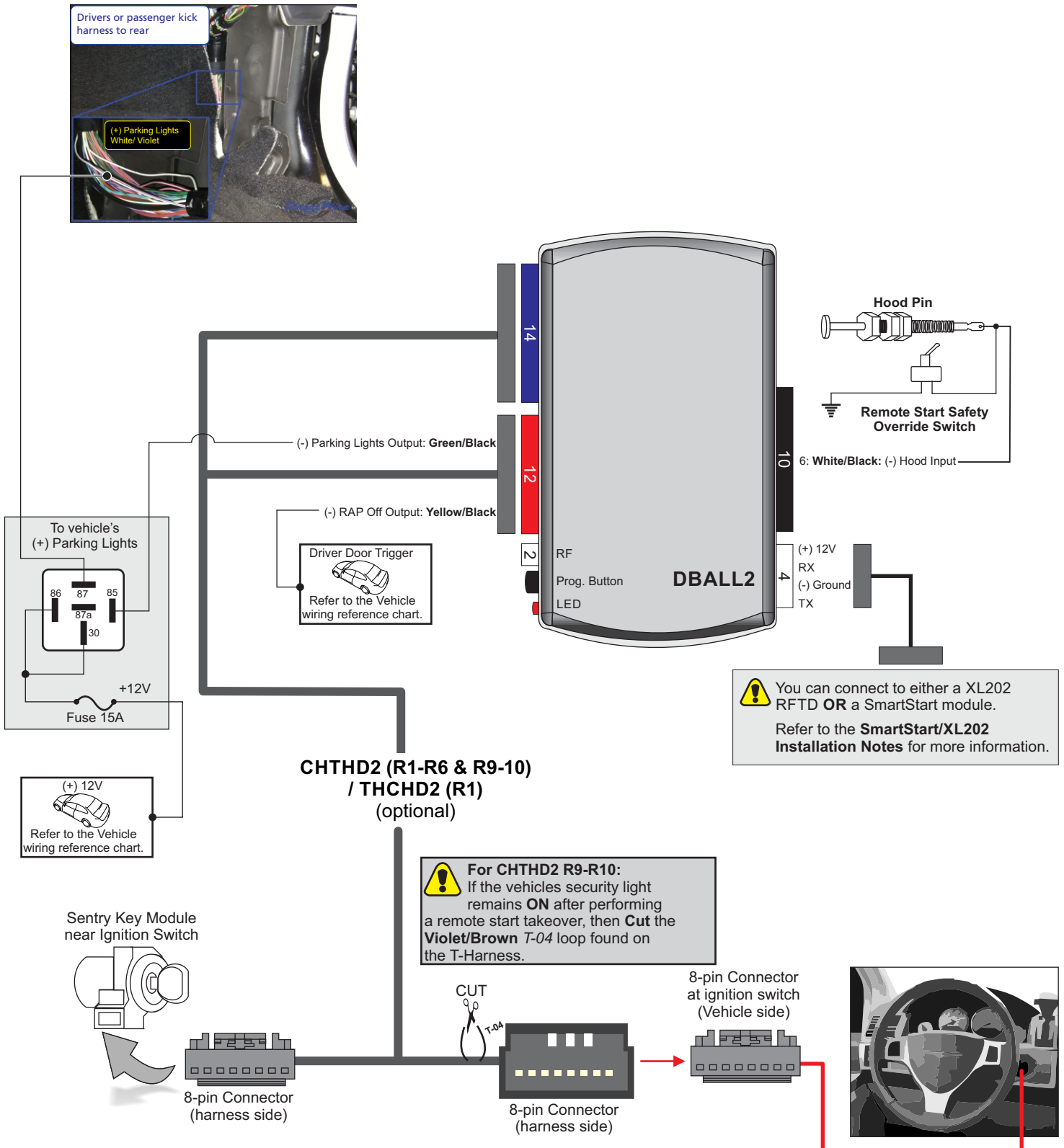
Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Chrysler 200 2011-2014						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	White/Lt/Blue	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	White/Dk.Blue	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red	3	(-)	Junction connector above drivers kick panel.	Green	43
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43
Chrysler Aspen 2007-2009						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red/Gray	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	White/Pink	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Pink/Red	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red/Gray	1	(-)	Driver kick panel fuse box.	Black	40
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43
Chrysler Sebring 2007-2010						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red	4	(-)	Junction connector above drivers kick panel.	Green	43
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43
Chrysler Sebring Convertible 2008-2010						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red	4	(-)	Junction connector above drivers kick panel.	Green	43
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43
Chrysler Sebring Sedan 2007-2010						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Tan/Red	4	(+)	Junction connector above drivers kick panel.	Green	43
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43
Dodge Avenger 2008-2014						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red	4	(+)	Battery or TIPM on passenger fender.	N/A	N/A
Driver Door Trigger	Violet	14	(-)	Under driver dash.	Lt.Gray	43

Type 5 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Dodge Caliber 2007-2012						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Pink	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay power	Red	N/A	(+)	Battery or TIPM on passenger fender.	N/A	N/A
Driver Door Trigger	Violet/Dk. Blue	17	(-)	Under driver dash.	Black	43
Dodge Dakota 2007-2011						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Pink or White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Driver Door Trigger	Violet or Violet/White	13	(-)	Under driver dash above kick panel.	Black	72
Dodge Durango 2007-2009						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Pink	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Orange/Dk.Blue	39	(+)	Drivers kick panel fuse box.	Gray	40
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Driver Door Trigger	Violet	5	(-)	Drivers door module in drivers door.	Brown	20
Jeep Compass 2007-2016						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Pink	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet/Dk. Blue	17	(-)	Under drivers dash.	Black	43
Jeep Patriot 2007-2016						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Pink	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
HS CAN High	Green	6	Data	OBDII diagnostic connector.	Black	16
HS CAN Low	Orange	14	Data	OBDII diagnostic connector.	Black	16
Parking Lights	White/Violet	N/A	(+)	Driver kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet/Dk. Blue	17	(-)	Under drivers dash.	Black	43
Mitsubishi Raider 2007-2009						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
Parking Lights	White/Violet	N/A	(+)	Driver kick panel.	N/A	N/A
Parking Light Relay Power	Re	2	(+)	Connector above drivers kick panel.	White	3
Driver Door Trigger	Violet	13	(-)	Under drivers dash above kick panel.	Black	72

Installation Type 6 - with CHTHD2 (R1-R6 & R9-R10) / THCHD2 (R1) T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



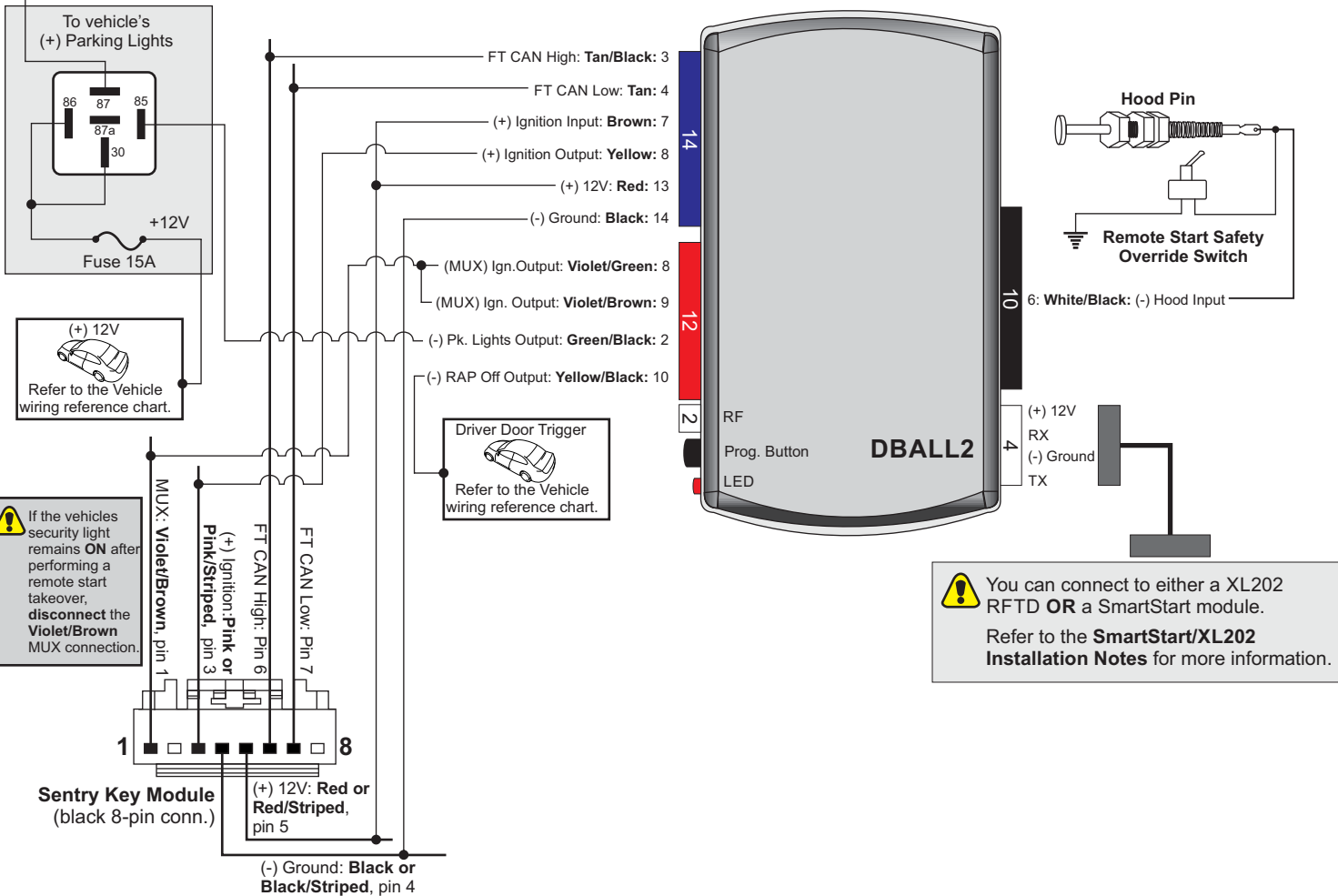
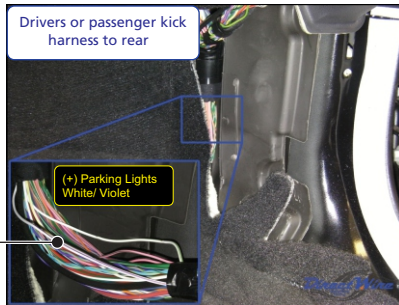
⚠️ You can connect to either a XL202 RFTD OR a SmartStart module. Refer to the SmartStart/XL202 Installation Notes for more information.

⚠️ For CHTHD2 R9-R10:
 If the vehicles security light remains ON after performing a remote start takeover, then Cut the Violet/Brown T-04 loop found on the T-Harness.

⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Installation Type 6 - without T-Harness

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



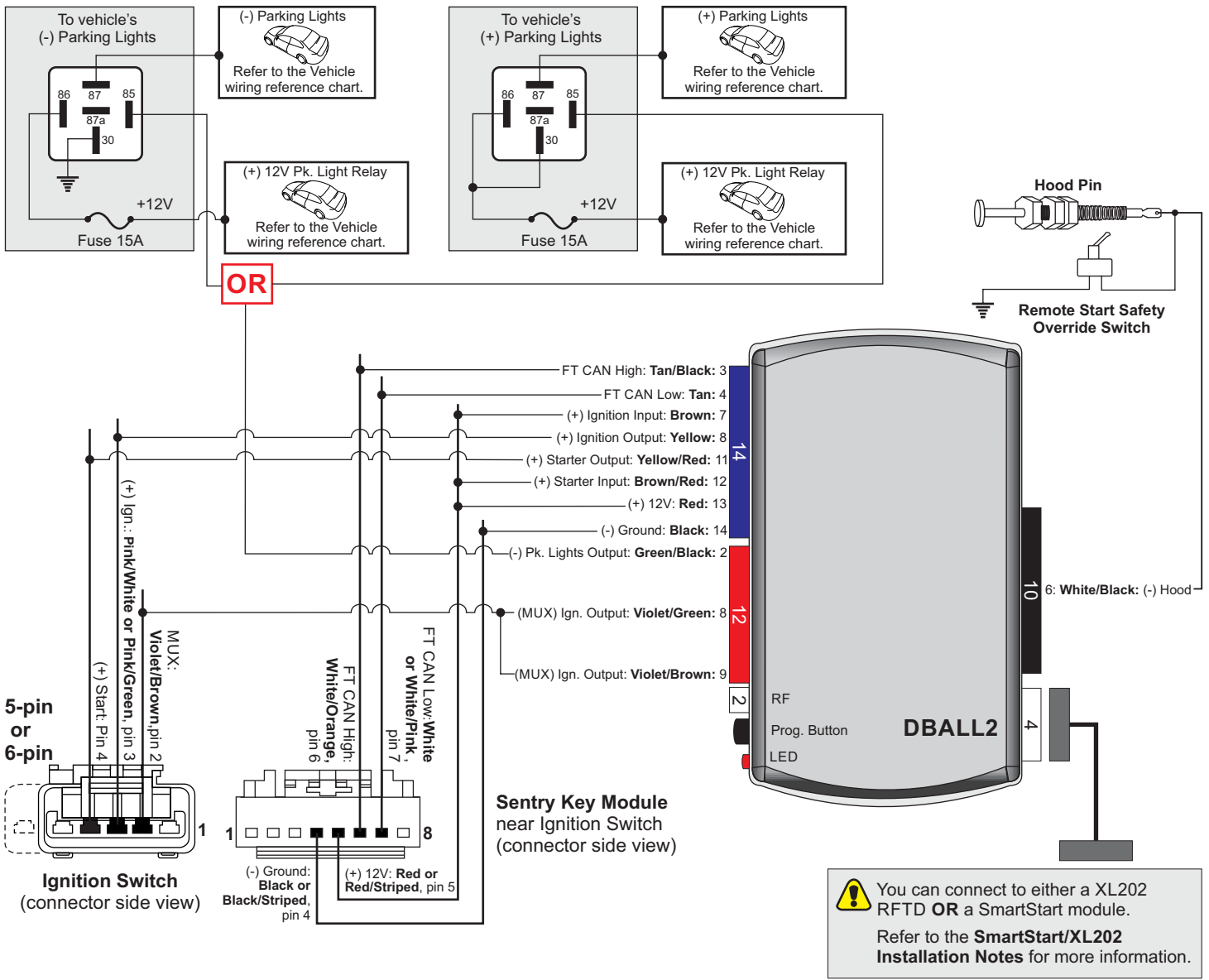
⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 6 - Vehicle Wiring Reference Chart

Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Dodge Nitro 2007-2011						
FT CAN High	White/Black or White/Lt.Green	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Lt.Blue	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
Parking Lights	White/Violet	N/A	(+)	Driver kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet	N/A	(-)	Driver kick.	N/A	N/A
Parking Lights Relay power	Red	N/A	(+)	Battery or under hood TIPM.	N/A	NA
Dodge RAM 2007-2008						
FT CAN High	White/Black or White/Lt.Green	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Lt.Blue	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Battery or under hood TIPM.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
Parking Lights	White/Violet	N/A	(+)	Driver kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet	N/A	(-)	Driver kick.	N/A	N/A
Parking Lights Relay power	Red	N/A	(+)	Battery or under hood TIPM.	N/A	NA
Jeep Liberty 2008-2012						
FT CAN High	White/Gray	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Orange	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	4	(+)	Driver kick.	Gray	43
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
Parking Lights	White/Violet	N/A	(+)	Driver kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet	N/A	(-)	Driver door, door harness.	N/A	N/A
Parking Lights Relay power	Red	4	(+)	Drivers kick panel.	Gray	43
Jeep Wrangler / Jeep Wrangler Limited 2007-2017						
FT CAN High	White/Black	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White/Lt.Blue	7	Data	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	1	MUX	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
Parking Lights	White/Violet	N/A	(+)	Passenger kick panel harness to rear of vehicle.	N/A	N/A
Driver Door Trigger	Violet	N/A	(-)	Driver kick, door harness.	N/A	N/A
Parking Lights Relay power	Red	N/A	(+)	Battery or under hood TIPM.	N/A	NA

Installation Type 7

⚠️ Refer to the Vehicle Wiring Reference Charts for wire color and location.



⚠️ All connectors are displayed from the wire side (unless specified otherwise).

Type 7 - Vehicle Wiring Reference Chart

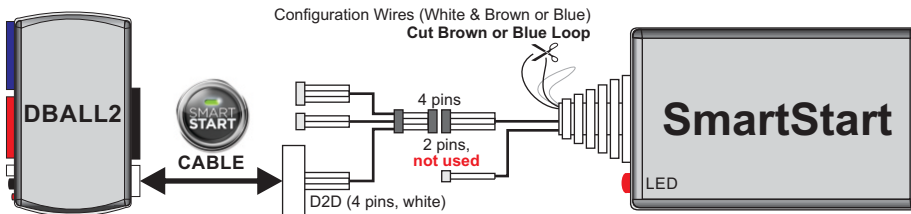
Wire Information				Connector Information		
Function	Color	Pin	Polarity	Location	Color	Pins
Chrysler 300/300c 2005-2007						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Dk. Green	4	(+)	Ignition switch.	Black	5 or 6
Parking Lights	White/Violet	N/A	(+)	Passenger kick panel harness.	N/A	N/A
Parking Lights Relay Power	Red/White	N/A	(+)	Passenger kick panel harness.	N/A	N/A
Chrysler PT Cruiser 2006-2010						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/White	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Lt.Blue	4	(+)	Ignition switch.	Black	5 or 6
Parking Lights	White/Violet	N/A	(+)	Driver kick, harness to rear.	N/A	N/A
Parking Lights Relay Power	Lt.Blue/Red	4	(+)	Junction connector above OBDII.	Black	N/A
Dodge Charger 2006-2007						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Orange	4	(+)	Ignition switch.	Black	5 or 6
Parking Lights	White/Violet	N/A	(+)	Passenger kick panel harness.	N/A	N/A
Parking Lights Relay Power	Red/White	N/A	(+)	Passenger kick panel harness.	N/A	N/A
Dodge Magnum 2005-2007						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Orange	4	(+)	Ignition switch.	Black	5 or 6
Parking Lights	White/Violet	N/A	(-)	Passenger kick panel harness.	N/A	N/A
Parking Lights Relay Power	Red/White	N/A	(+)	Passenger kick panel harness.	N/A	N/A
Dodge RAM 2006						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Orange	4	(+)	Ignition switch.	Black	5 or 6
Hazards	White/Orange	5	(-)	Hazard switch or Instrument cluster.	Gray	16
Parking Lights Relay Power	Tan/Red	4	(+)	Electric brake conn. above junction connector.	Blue	4
Jeep Commander 2006-2007						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Orange	4	(+)	Ignition switch.	Black	5 or 6
Hazards	White/Dk. Blue to White/Tan	16	(-)	SCM (Steering Column module) in steering column.	N/A	16
Parking Lights Relay Power	Red	40	(+)	Top connector above fuses.	Black	40
Jeep Grand Cherokee 2005-2007						
FT CAN High	White/Orange	6	Data	Sentry Key Module near ignition switch.	Black	8
FT CAN Low	White	7	Data	Sentry Key Module near ignition switch.	Black	8
12V	Red or Red/Striped	5	(+)	Sentry Key Module near ignition switch.	Black	8
Ground	Black or Black/Striped	4	(-)	Sentry Key Module near ignition switch.	Black	8
MUX Ignition	Violet/Brown	2	MUX	Ignition switch.	Black	5 or 6
Ignition	Pink/Green	3	(+)	Ignition switch.	Black	5 or 6
Starter	Pink/Orange	4	(+)	Ignition switch.	Black	5 or 6
Hazards	White/Dk. Blue	16	(-)	SCM (Steering Column module) in steering column.	N/A	16
Parking Lights Relay Power	Red	40	(+)	Top connector above fuses.	Black	40

SmartStart/XL202 Installation Notes

The DBALL2 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

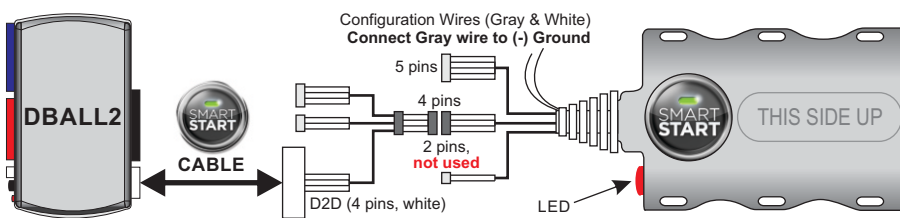
SmartStart is **optional** and not included. It **MUST** be purchased separately.



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

SmartStart Revision B

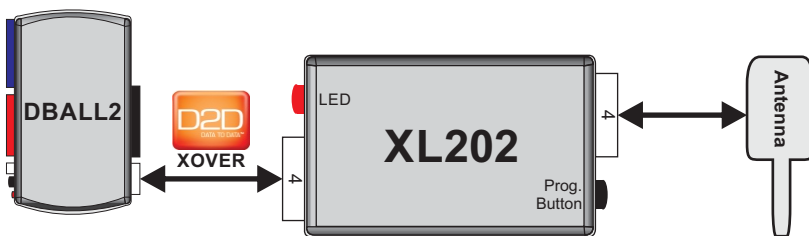
SmartStart is **optional** and not included. It **MUST** be purchased separately.



! 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 (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 (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 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

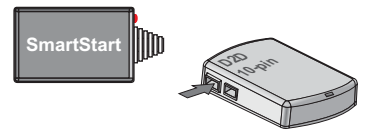
1. Connect the interface module to your XKLoader3.
2. Launch the Directechs Mobile app on your smartphone or tablet.
3. Select **FLASH YOUR MODULE** and follow the on screen instructions.

When the flashing operation is successful, you can proceed with the programming instructions below.

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.

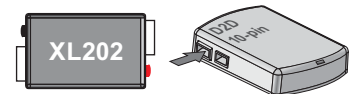


Connect SmartStart to DBALL2 using the D2D port.

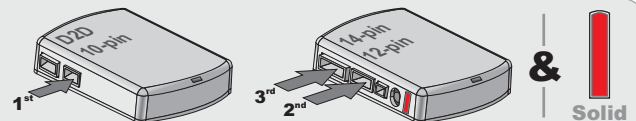
OR

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 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 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.

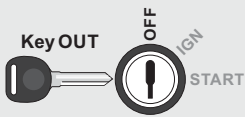


It is important to wait for the LED to start flashing green. Refer to the LED Diagnostics section for troubleshooting if the LED does not flash green within 15 seconds.

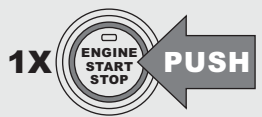


Go to the next page to complete the module programming. 



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



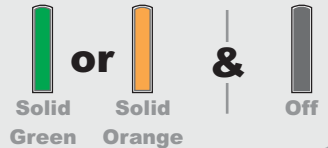
or Press the Push-to-Start (PTS) button once more to turn the ignition OFF.



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

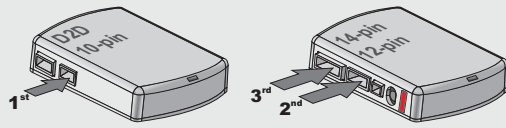
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You have successfully completed the module programming sequence.

Vehicles WITHOUT Factory Keyless
 (Refer to the previous page for programming instructions WITH factory keyless).

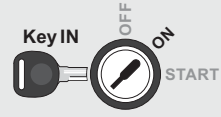
1 Connect the 10-pin, 12-pin and 14-pin harnesses to DBALL2, then wait until the LED turns ON solid red.




&



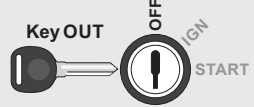
2 Insert the key into the ignition barrel and turn it to the ON position. It is important to wait for the LED to start flashing green.*
 * Refer to the LED Diagnostics section for troubleshooting if the LED does not flash green within 15 seconds.




&




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.



&

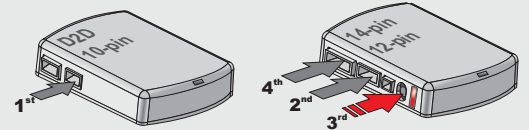


You have successfully completed the module programming sequence.

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.

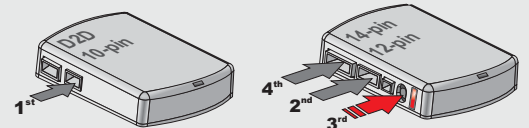


Hard Reset

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. Trunk*	Will pop the trunk if available.
		2. Right Sliding Door	When available, will operate the right sliding door.
		3. Left Sliding Door	When available, will operate the left sliding door.
4	Aux1	1. Trunk	Trunk: Will pop the trunk if available.
		2. Right Sliding Door*	When available, will operate the right sliding door.
		3. Left Sliding Door	When available, will operate the left sliding door.
5	Aux2	1. Disabled	3./4. Right/Left Sliding Door: When available, will operate the sliding door.
		1. Trunk	Will pop the trunk if available.
		2. Right Sliding Door	When available, will operate the right sliding door.
6	Heated Seats	1. Disabled*	No operation.
		2. Enabled	If available, it will activate the Heated Seats Control feature (see feature #7)
		1. 32° Fahrenheit (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).
7	Heated Seats/Defrost Temperature Control (Feature 6 must be enabled) Note: If the Heated Seats feature is activated, it can always be turned on using the Aux2 command, regardless of the temperature setting.	2. 23° Fahrenheit (-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° Fahrenheit (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. When installing the DBALL2 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
Module Programming		
 Off	Module has no power.	Make sure the D2D harness is connected or that the 12 Volt is present between the red and black wires. If the 12 Volt is present, the module may be defective.
 Solid red	Waiting to begin the programming sequence.	Ensure the correct programming procedure is being followed.
 Flashes red & green	Initialization failed.	Reset the module and complete the programming again. If the issue persists, please contact Technical Support.
 Solid orange	Transponder functions were skipped.	(If compatible) when RXT mode is not desired or convenience features are needed, please reset and reprogram the module.
 Flashes green	All required CAN networks has been detected.	Normal operation.
 Flashes orange	1 of 2 CAN networks has been detected.	Normal operation
 Flashes orange slowly	Key2GO initiated.	Please follow the steps indicated in "Module programming" to complete the Key2GO programming.
 Solid green x 3 secs	Module was successfully programmed with all functions.	Normal operation
 Solid orange x 3 secs	Module was successfully programmed without transponder functions.	Normal operation.
Module Programming - Error Codes		
 Flashes red x 1	CAN2 not detected.	Check the CAN2 Orange/Green and Orange/Brown wire connections. Wake up the data bus by turning the ignition on and try again. If your installation does not require this connection, skip this step by pressing the programming button 5 times.
 Flashes red x 1	J1850 not detected.	Check the J1850 wire connection. Wake up the data bus by turning the ignition on and try again.
 Flashes red x 2	CAN1 not detected.	Check the CAN1 Tan and Tan/Black wire connections. Wake up the data bus by turning the ignition on and try again. If your installation does not require this connection, skip this step by pressing the programming button 5 times.
 Flashes red x 3	Bypass data not detected.	Check the bypass line connection. If more than one wire is used, make sure they are not inverted. Ensure the vehicle still operates correctly using the factory key.
 Flashes red x 4	Bypass processing error.	The bypass calculation failed. Reset the module and try again. If the condition persists, please contact Technical Support.
 Flashes red x 5	ISO 1 not detected.	The Yellow/Black wire did not detect the expected signal. Refer to "Installation (wiring diagrams & vehicle wiring reference charts)" to check the connections.
 Flashes red x 6	ISO 2 not detected.	The Orange/Black wire did not detect the expected signal. Refer to "Installation (wiring diagrams & vehicle wiring reference charts)" to check the connections.
 Flashes red x 7	MUX not detected.	The Violet/Green or Violet/Brown wire did not detect the expected voltage value. Refer to "Installation (wiring diagrams & vehicle wiring reference charts)" to check the connections.

LED Diagnostics & Troubleshooting

LED	Description	Troubleshooting
External module synchronization		
 (Flashes red, red then orange) x 10	OBDDII feature is not supported.	The diagnostic data bus was not detected, therefore the SmartStart features will be limited.
Activation Ground When Running (Status)		
 Flashes green	Ground When Running (Status) command received.	The module has initialized the remote start sequence.
 Flashes red & orange	Ignition ON command received.	The module has received the Ignition ON command and is processing the remote start sequence.
 Flashes green quickly	Start ON command received.	The module has received the Start ON command and is processing the remote start sequence.
 Flashes red x 10	PTS shutdown error.	The PTS output from the module was not activated due to safety protection.
 Flashes red x 21	CAN bus incorrectly detected.	Verify the CAN1 and CAN2 connections. Refer to "Installation (wiring diagrams & vehicle wiring reference charts)" to check the connections.
Commands		
 Flashes orange x 1	LOCK command received.	If the bypass module fails to flash, it did not receive the signal. Commands can come from RF or D2D.
 Flashes orange x 2	UNLOCK command received.	
 Flashes orange x 3	TRUNK command received.	
 Flashes orange x 4	AUX1 command received.	
 Flashes orange x 5	AUX2 command received.	
 Flashes orange x 6	AUX3 command received.	
Shutdown codes		
 Flashes green x 1	Takeover successful.	Normal operation.
 Flashes red x 1	Runsafe was not disabled.	No UNLOCK command was received prior to opening the door, or the 45 second timer expired in takeover mode.
 Flashes red x 2	Brake was not detected.	The brakes were not detected, which prevents the system from shutting down the vehicle.
 Flashes red x 3	Smart key was not detected.	The smart key was not detected, which prevents the system from shutting down the vehicle.
 Flashes red x 4	Speed was detected.	The vehicle was detected as moving, which prevents the system from shutting it down.
RSR codes		
 Flashes red x 7	3x OEM Lock Remote Start Activation was attempted when RFTD feature is disabled.	Activated from Web automatically when using RSR flash tool or can be done manually. Refer to feature programing section for more information.
 Flashes red x 9	Feature error.	An RSR feature file mismatch was detected. Please contact Technical Support.

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

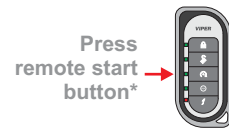
920-10012-01 2013-07

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

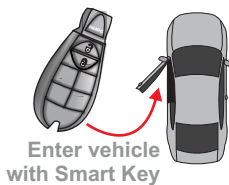
1 Press the remote start button on the transmitter to start the vehicle.*



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

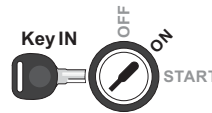


3 Enter the vehicle, while making sure the key is inside with you.



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.

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).

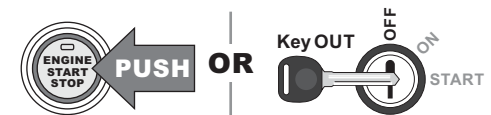


Press the button to remote start the vehicle.*

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

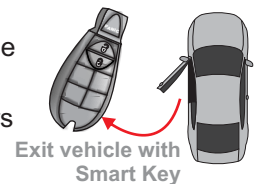


3 Press the PTS button once or remove key from the ignition.



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.







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.

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).
$f \times 1 + \text{AUX}$	Press f once, then  to activate the rear hatch/tail glass release (optional).*
$f \times 1 + \text{Remote Start}$	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

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
