

Automotive Data Solutions Inc.

# INSTALL GUIDE ADS-TB-TL

TL

**AVAILABLE FOR: ADS-TB**

*Rev. Date: January 20, 2011*

*Doc. No.: ##4672##*

*20101221*

VERSION FRANÇAISE DISPONIBLE EN LIGNE AU [WWW.IDATALINK.COM](http://WWW.IDATALINK.COM)

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 **TOYOTA LEXUS SCION PONTIAC.**

**NOTICE:** The manufacturer will accept no responsibility for any electrical damage resulting from improper installation of this product, be that either damage to the vehicle itself or to the installed device. This device must be installed by a certified technician. This guide has been written for properly trained technicians; a certain level of skill & knowledge is therefore assumed. Please review the Installation Guide carefully before beginning any work.

### INSTALL TYPE SELECTION

MAKE	MODEL	YEAR	INSTALL TYPE
TOYOTA	4Runner	99-02	1
	4Runner	03-09	2
	Avalon	98-04	1
	Avalon	05-09	2 or 3
	Camry	98-02	1
	Camry	03-04	1 or 2
	Camry	05-06	2
	Camry	07-09	2 or 3
	Camry Hybrid	07-09	3
	Corolla	05-08	2
	Corolla	09	2 or 3
	FJ Cruiser	07-09	2
	Hiace	06-09	2
	Highlander	01-03	1
	Highlander	04-07	2
	Highlander	08-09	2 or 3
	Highlander Hybrid	06-07	5
	Highlander Hybrid	08-09	3
	Hilux	04-09	2
	Land Cruiser	98-02	1
	Land Cruiser	03-07	2
	Land Cruiser	08	3
	Matrix	05-09	2
	MR2 Spyder	00-05	1
	Prius	04-09	4
	RAV4	01-03	1
	RAV4	04-08	2
	RAV4	09	2 or 3
	Sequoia	01-07	1
	Sequoia	08-09	2
	Sienna	99-03	1
	Sienna	04-09	2
	Solara	99-02	1
	Solara	03-04	1 or 2
	Solara	05-08	2
	Tacoma	05-09	2
	Tundra	06	1
	Tundra	07-09	2
	Venza (standard key only)	09	2
	Yaris	06-09	2

MAKE	MODEL	YEAR	INSTALL TYPE
LEXUS	ES 300	98-03	1
	ES 330	04-06	2
	ES 350	07-08	3
	GS 300	98-05	1
	GS 300	06	3
	GS 350	07-08	3
	GS 400	98-00	1
	GS 430	01-05	1
	GS 430	06-07	3
	GS 450 Hybrid	07-08	3
	GS 460	08	3
	GX 470	03-09	2
	IS 250	06-08	3
	IS 300	01-05	1
	IS 350	06-08	3
	IS-F	08	3
	LS 400	98-00	1
	LS 430	01-03	1
	LS 430	04-06	1 or 2
	LS 460	07-08	3
	LS 600 Hybrid	08	3
	LX 470	98-02	1
	LX 470	03-07	2
PONTIAC	RX 300	99-03	1
	RX 330	04-06	2
	RX 350	07-09	2
	RX 400 Hybrid	06-08	5
	SC 300	98-00	1
	SC 400	98-00	1
	SC 430	02-09	1
	Vibe	08-09	2
SCION	tC	05-09	2

#### NOTE

- I 1/2 -Type may vary by vehicule equipment level.  
2/3 -Type may be standard key or push to start.  
NC -Not covered
- II WARNING: Please advise that the install type numbers have changed since the last revision of this install guide.
- III Type 3 install provides simulated tach output for hybrid vehicles.

A hybrid vehicle might be running without its engine being running.  
To determine whether a hybrid vehicle is running or not, look at the instrument cluster, radio and heating system.

"Push to Start" vehicles have a maximum take over time of 45 seconds: for security reasons, during the remote starter runtime, the driver must press the unlock button of the remote starter fob to trigger a 45 seconds time window which will permit him/her to step into the vehicle and press the brake pedal to complete take over.

### KNOWLEDGE BASE

#### REGARDING THE TXCT WIRE

##### IMPROVED INSTALL TYPES 2,3,4 and 5 WITHOUT CUTTING THE TXCT WIRE

The new installation types without cutting the TXCT wire are a result of long term engineering researches, during the researches, it's been possible for our engineers to MAP the entire encryption for every vehicles covered by the TL Firmware. The MAP can now be used to learn the module without the need to send multiple challenges to the immobilizer receiver located at the key cylinder. During your install a simple connection to the TXCT wire will be made without interrupting cutting or interrupting it. During the learning process the module will automatically refer to the MAP. The most popular vehicles are listed first and the MAP refers to the less popular at the end.

##### ADVANCED DIAGNOSTIC

The Firmware is monitoring the entire module learning process and records every steps in its EEPROM!

As soon the module is connected to the vehicle it starts monitoring and recording all its I/O's (same as an airplane black box). The information can be extracted from the module and sent to your technical support team for advanced debugging at any required time.

The information recorded is:

- Install Type
- Detects and registers Key Code Encryption
- Detects 80 Bits encryption keys (not supported)
- Records MAP reference
- Records Key Code Encryption
- Detects, records key collisions during remote start
- Offers a safety protection on Ground When Running Status
- Monitors RS232 communications
- Detects if the Module key code sent to vehicle was validated or rejected
- Filters and detects spikes on the ignition wire
- Protected memory buffer for module key code recovery even after module is re-flashed and a factory reset is been performed.
- TXCT/CODE inversion detection and protection
- Records Installation mode, firmware, hardware informations
- Protection enabled to learn the vehicle even if the immobilizer is in password mode

##### THE ADVANTAGES:

The TL solution is the safest and most reliable solution available in the field for the Toyota and Lexus vehicles. The MAP system is an exclusive improvement to protect the vehicle Immobilizer module during programming. With the use of this module, you will definitely secure your remote starter install with the best and safest known solution available in the market.

##### OLDER FIRMWARE:

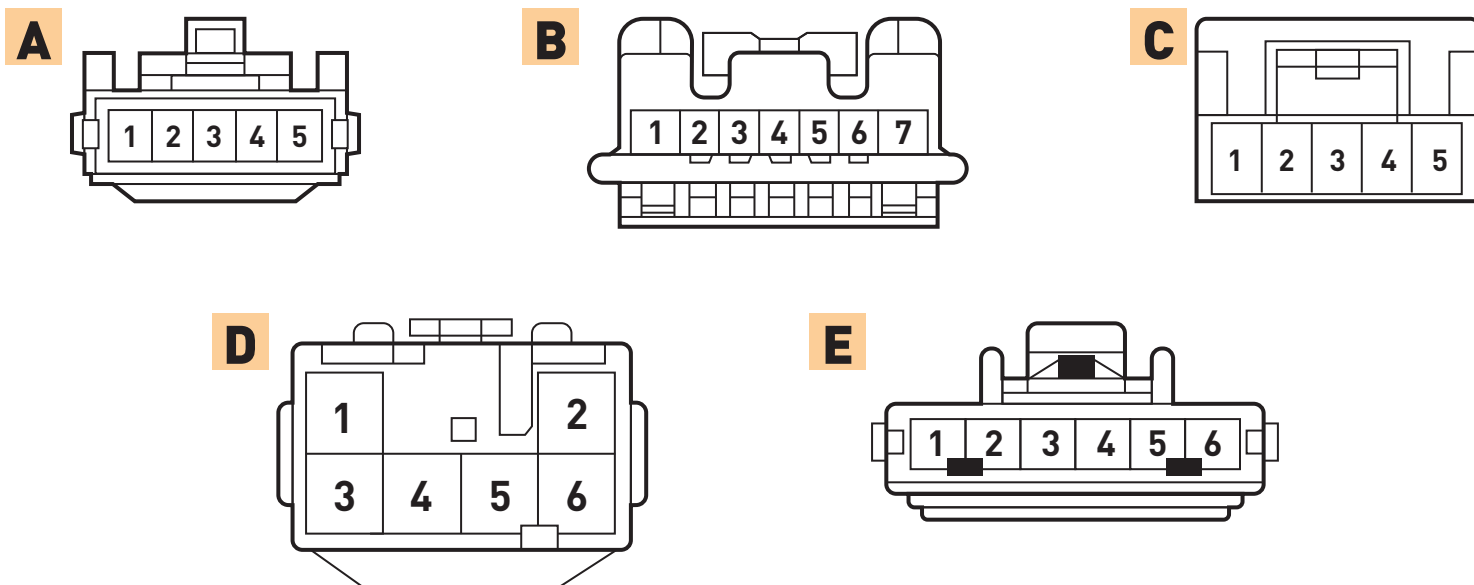
Call your technical support if you need access to an older firmware.

- Firmware connecting to the IMI & IMO wires
- Firmware cutting the TXCT wire upon programming.

### TYPE 1 - WIRE CROSS REFERENCE CHART

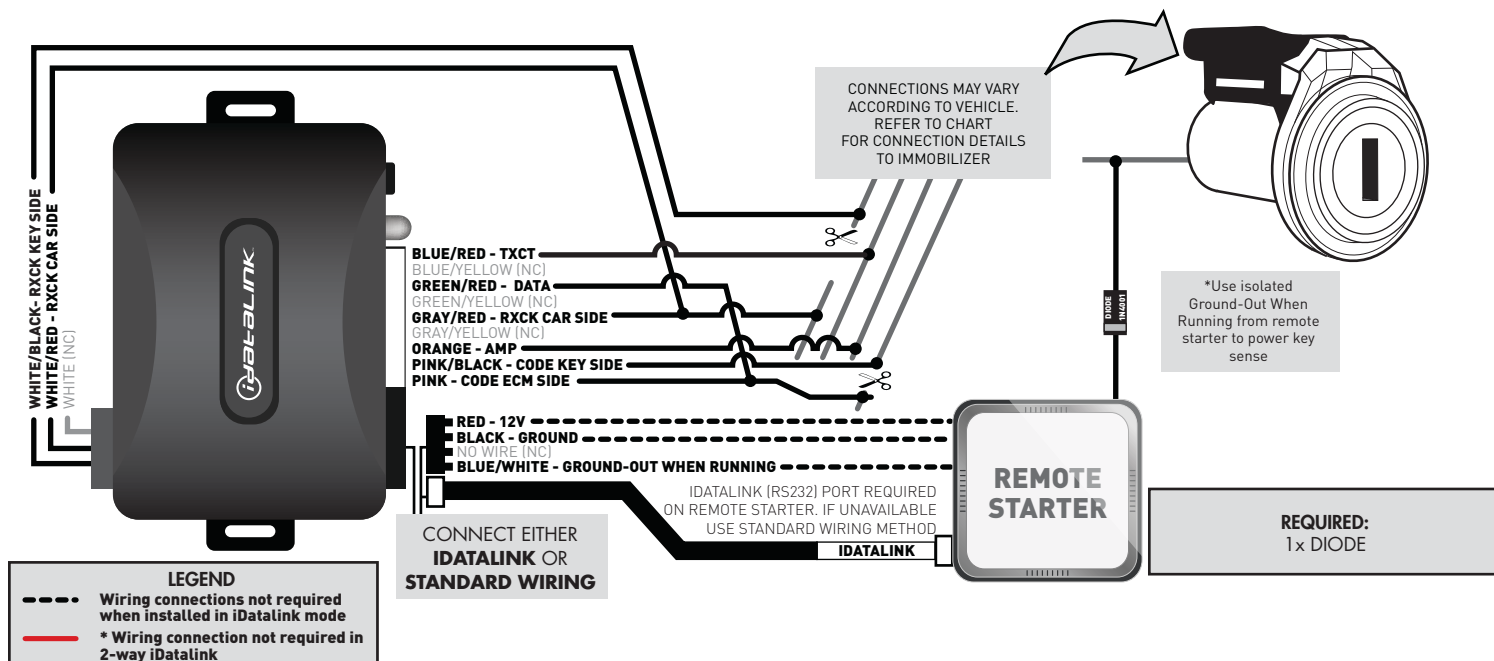
MAKE	MODEL	YEAR	AMP		CODE		RXCK		TXCT		GROUND (-)		KEY SENSE	CONNECTOR
			POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	WIRE COLOR	
TOYOTA	4Runner	99-02	1	White/Blue	2	Gray/Red	3	Red/Black	4	Pink/Black	5	Brown	Yellow/Red	A
	Avalon	98-99	1	LtGreen	2	Black/Red	3	Yellow	4	Green	5	White/Black	Red/Yellow	A
	Avalon	00-04	1	Black/White	2	Pink/Green	3	Blue/Orange	4	Blue/Yellow	5	White/Black	Red/White	A
	Camry	98-01	1	Black/Yellow	2	Green/White	3	Red/Blue	4	Blue/Yellow	5	White/Black	Blue/Black	A
	Camry (4cyl)	02-04	1	Black/Red	4	Green/White	3	Red/Blue	5	Blue/Yellow	7	White/Black	Blue	B
	Camry (6cyl)	02-03	1	Black/Red	4	Green/White	3	Red/Blue	5	Blue/Yellow	7	White/Black	Blue	B
	Highlander	01-03	1	White	4	Gray/Blue	3	Pink	5	Gray	7	White/Black	Blue	B
	Land Cruiser	98-02	1	Black/Yellow	2	Blue/Black	3	Purple/Green	4	Red/Yellow	5	White/Black	Red/Black	E
	MR2 Spyder	00-05	5	Black	2	Blue/Yellow	4	Yellow	1	Blue/Black	3	White/Black	Yellow/Red	C
	RAV4	01-03	5	Black/Red	2	Yellow/Green	4	Yellow	1	Yellow/Black	3	White/Black	Blue/Red	C
	Sequoia	01-02	1	Black/Red	4	Red/Yellow	5	LtGreen	6	Yellow/Green	2	Orange	Yellow/Green	D
	Sequoia	03-07	1	Gray/Black	4	Red/Yellow	5	LtGreen	6	Yellow/Green	2	Gray/LtBlue	Yellow/Green	D
	Sienna	99-03	1	Black/Red	2	Brown/White	3	Brown/Red	4	Brown/Yellow	5	White/Black	Blue/Black	A
	Solara	99-03	1	Red	2	Green/White	3	Red/Blue	4	Blue/Yellow	5	White/Black	Blue/Black	A
	Tundra S. Cab	06	1	Red	3	Green	4	Blue/Red	5	Gray	2	Pink	Pink/Black	D
	Tundra D. Cab	06	1	White	4	Green	5	Red	6	Black	2	Gray	Yellow/Green	D
LEXUS	ES300	98-01	1	Black/Yellow	2	Green/White	3	Red/Blue	4	Blue/Yellow	5	White/Black	Blue/Black	A
	ES300	02-03	1	Black/Red	4	Green/White	3	Red/Blue	5	Blue/Yellow	7	White/Black	Blue	B
	GS 300	98-00	1	Black/Red	2	Green/Black	3	Black/White	4	Blue/Red	5	White/Black	Yellow	E
	GS 300	01-05	1	Black/Red	2	Green/Black	3	Black/White	4	Blue/Red	5	White/Black	Yellow	A
	GS 400	98-00	1	Black/Red	2	Green/Black	3	Black/White	4	Blue/Red	5	White/Black	Yellow	E
	GS 430	01-05	1	Black/Red	2	Green/Black	3	Black/White	4	Blue/Red	5	White/Black	Yellow	A
	IS 300	01	1	Black/Red	2	Green	3	Purple	4	Pink	5	White/Black	Black/Yellow	A
	IS 300	02-05	1	Black/Red	2	Green/Black	3	Purple	4	Pink/Black	5	White/Black	Black/Yellow	A
	LS 400	98-00	1	White	2	Red/White	3	Red/Black	4	Red	5	White/Black	Yellow	A
	LS 430	01-03	1	Orange	4	Red/White	3	White/Red	5	LtBlue/Black	7	Violet	LtGreen/Black	B
	LS 430 (smartkey)	04-06	1	Red	4	Orange	3	LtBlue	5	Yellow/Black	7	Violet	LtGreen/Black	B
	LX 470	98-02	1	Black/Yellow	2	Blue/Black	3	Purple/Green	4	Red/Yellow	5	White/Black	Red/White	E
	RX 300	99	1	Blue/White	2	Purple	3	Black	4	Gray	5	White/Black	Blue	A
	RX 300	00	1	Blue/White	2	Purple	3	Pink	4	Gray	5	White/Black	Blue	A
	RX 300	01-03	1	Black/Red	2	Purple	3	Pink	4	Gray	5	White/Black	Blue	A
	SC 300	98-00	1	Black/Red	2	Black/Orange	3	Blue	4	Green/Orange	5	White/Green	Yellow	A
	SC 400	98-00	1	Black/Red	2	Black/Orange	3	Blue	4	Green/Orange	5	White/Green	Yellow	A
	SC 430	02-09	1	Yellow	2	Violet/White	3	Red	4	Green	5	Violet	LtGreen/Black	A

### TYPE 1 - COMPONENT LOCATOR - CONNECTORS



Connector located at immobilizer near key barrel or 8 inches lower on the immobilizer harness.

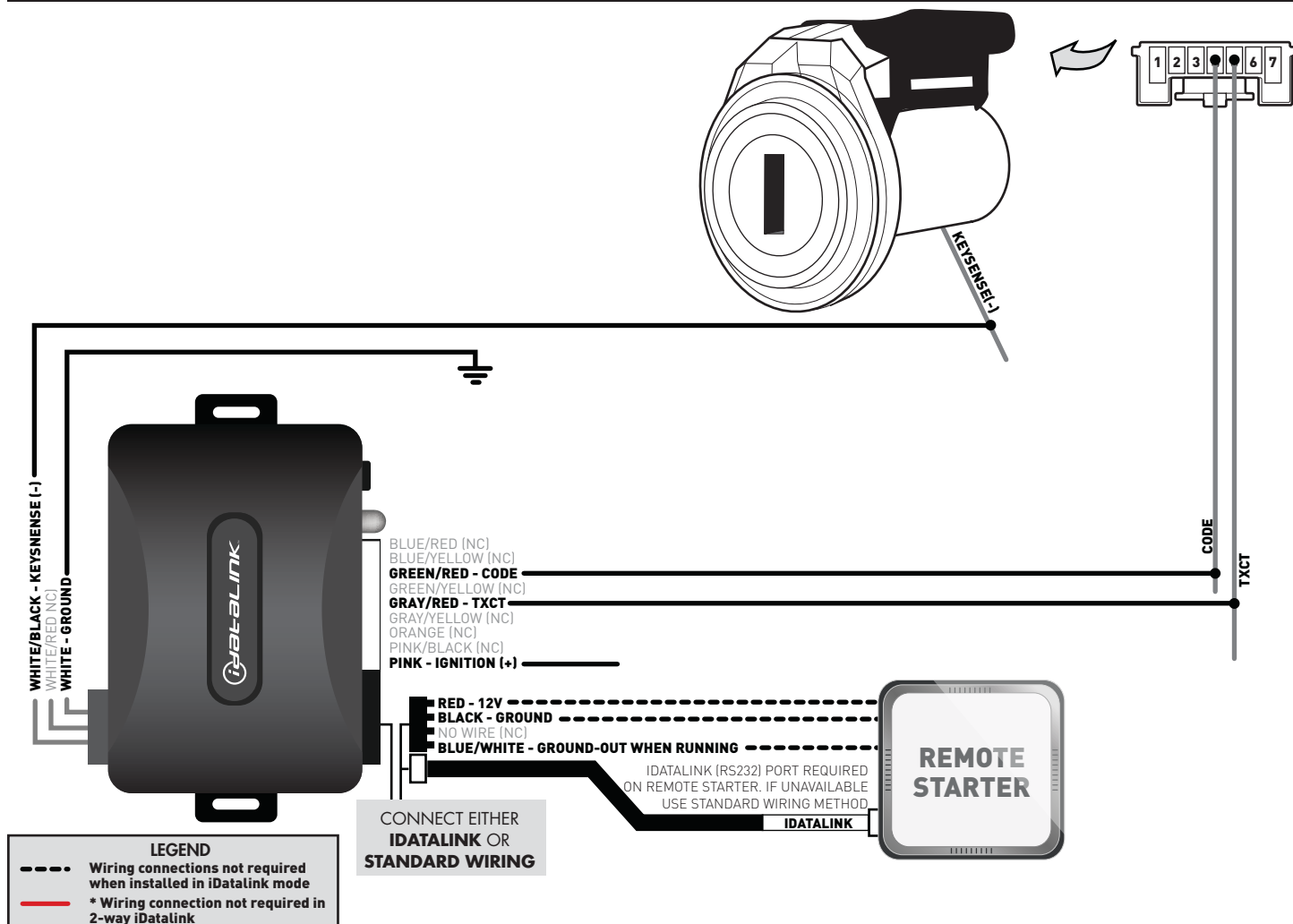
### TYPE 1 - WIRING DIAGRAM



### TYPE 2 - WIRE CROSS REFERENCE CHART

MAKE	MODEL	YEAR	CODE		TXCT		KEY SENSE
			POSITION	WIRE COLOR	POSITION	WIRE COLOR	WIRE COLOR
TOYOTA	4Runner	03-09	4	Pink/Green	5	LtGreen/Red	Green/Yellow
	Avalon	05-09	4	LtGreen	5	Brown	Black
	Camry	03-06	4	Green/White	5	Blue/Yellow	Blue
	Camry	07-09	4	Brown	5	Red	Blue
	Corolla	05-08	4	Blue	5	Green	Blue/Black
	Corolla (Japan)	09	4	LtBlue	5	Beige	LtBlue
	Corolla (Canada)	09	4	Pink	5	Green	LtBlue
	FJ Cruiser	07-09	4	Pink/Green	5	LtGreen/Red	Green/Yellow
	Hiace	06-09	4	Blue	5	Yellow	Yellow/Black
	Highlander	04-07	4	Gray	5	White	Green
	Highlander	08-09	4	Red	5	LtBlue	LtBlue
	Hilux	04-09	4	LtBlue/Yellow	5	LtBlue/Black	Green/Yellow
	Land Cruiser	03-07	4	Blue/Black	5	Violet/Green	Red/Black
	Matrix	05-08	4	Blue	5	Green	Blue/Black
	Matrix	09	4	LtBlue	5	Beige	Blue
	RAV4	04-05	4	Blue/Red	5	Pink	Blue/Red
	RAV4	06-09	4	Pink	5	Green	Blue
	Sequoia	08-09	4	LtGreen	5	Blue	Gray
	Sienna	04-09	4	Yellow	5	Yellow/Red	Blue/Black
	Solara (Convertible)	04-08	4	Green/White	5	Blue/Yellow	Blue
	Solara (Coupe)	04-08	4	Yellow	5	Yellow/Red	Blue
	Tacoma	05-09	4	Pink/Green	5	LtGreen/Red	Green/Black
	Tundra	07-09	4	LtGreen	5	Blue	Gray
	Venza	09	4	LtGreen	5	Brown	Brown
	Yaris	06-09	4	Green	5	Violet	Yellow
LEXUS	ES 330	04-06	4	Green/White	5	Blue/Yellow	Blue
	GX 470	03-09	4	Yellow	5	Yellow/Black	Green/Yellow
	LS 430	04-06	4	Red/White	5	Blue/Black	LtGreen/Black
	LX 470	03-07	4	Blue/Black	5	Violet/Green	Red/Black
	RX 330	04-06	4	LtGreen	5	Brown	Black
	RX 350	07-08	4	LtGreen	5	Brown	Black
PONTIAC	Vibe	08	4	Blue	5	Green	Blue/Black
	Vibe	09	4	LtBlue	5	Beige	Blue
SCION	tC	05-09	4	Yellow	5	Red	Black

## TYPE 2 - WIRING DIAGRAM

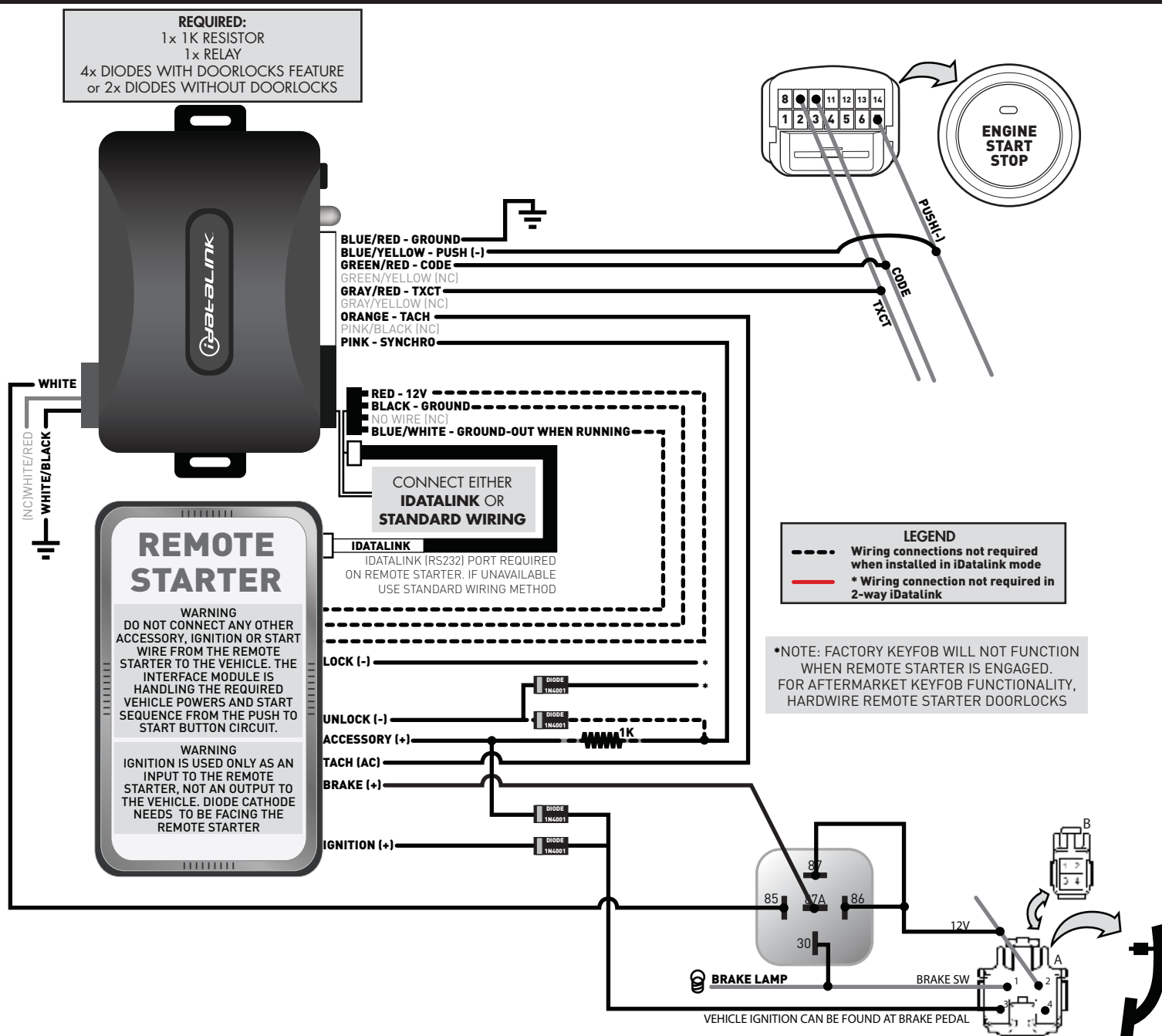


### TYPE 3 - WIRE CROSS REFERENCE CHART

MAKE	MODEL	YEAR	CODE		TXCT		PUSH		IGNITION		12V (BRAKE)		BRAKE	
			POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR
TOYOTA	Avalon (smartkey)	05-09	10	White	9	Gray	7	Blue	A3	Brown	A2	Black	A1	White
	Camry Hybrid	07-09	10	White	9	Gray	7	Blue	A3	Black	A2	Black	A1	White
	Camry (smartkey)	07-09	10	White	9	Gray	7	Blue	A3	Black	A2	Black	A1	Blue
	Corolla (smartkey)	09	10	Green	9	LtBlue	7	White	A3	Black	A2	White	A1	Blue
	Highlander (smartkey)	08-09	10	Gray	9	Orange	7	Pink	A3	White	A2	Violet	A1	Blue
	Highlander Hybrid	08-09	10	Gray	9	Orange	7	Pink	A3	White	A2	Violet	A1	Blue
	Land Cruiser	08	10	Green	9	LtBlue	7	Black	B3	Black	B2	Blue/Black	B1	Red
	RAV4 (smartkey)	09	10	White	9	Blue	7	White	B4	Black	B2	White	B1	Blue
LEXUS	ES 350	07-08	10	White	9	Gray	7	Blue	A3	Black	A2	Black	A1	Blue
	GS 300	06	10	Yellow	9	Blue	7	Pink	B3	Black/White	A2	Blue/White	B1	Red/Black
	GS 350	07-08	10	Yellow	9	Blue	7	Pink	B3	Black/White	B2	Blue/White	B1	Red/Black
	GS 430	06-07	10	Yellow	9	Blue	7	Pink	B3	Black/White	B2	Blue/White	B1	Red/Black
	GS 450 Hybrid	07-08	10	Yellow	9	Blue	7	Pink	B3	Black/White	B2	Blue/White	B1	Red/Black
	GS 460	08	10	Yellow	9	Blue	7	Pink	B3	Black/White	B2	Blue/White	B1	Red/Black
	IS 250	06-08	10	LtBlue	9	Blue	7	Black	B4	LtGreen	B2	Blue/White	B1	Red/Black
	IS 350	06-08	10	LtBlue	9	Blue	7	Black	B4	LtGreen	B2	Blue/White	B1	Red/Black
	IS-F	08	10	LtBlue	9	Blue	7	Black	B4	LtGreen	B2	Blue/White	B1	Red/Black
	LS 460	07-08	10	White	9	Orange	7	White	B3	Red	B2	Green	B1	Blue
	LS 600 Hybrid	08	10	White	9	Orange	7	White	B4	LtGreen	B2	Green	B1	Red/Black



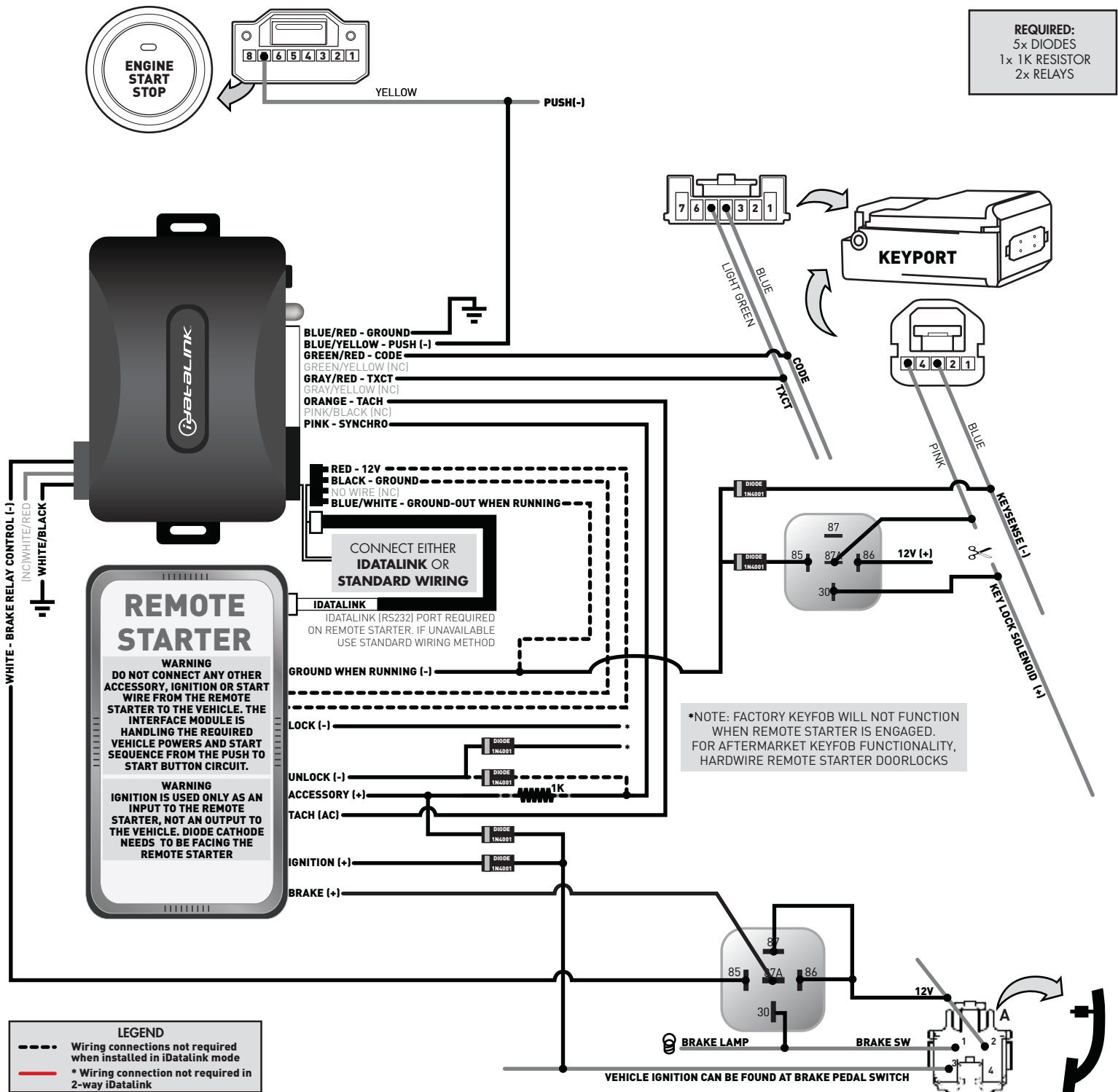
### TYPE 3 - WIRING DIAGRAM



### TYPE 4 - WIRE CROSS REFERENCE CHART

MAKE	MODEL	YEAR	CODE		TXCT		PUSH TO START		IGNITION		12V (BRAKE)		BRAKE	
			POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR	POSITION	WIRE COLOR
TOYOTA	Prius	04-09	4	Blue	5	LtGreen	7	Yellow	A3	Orange	A2	Black	A1	Blue

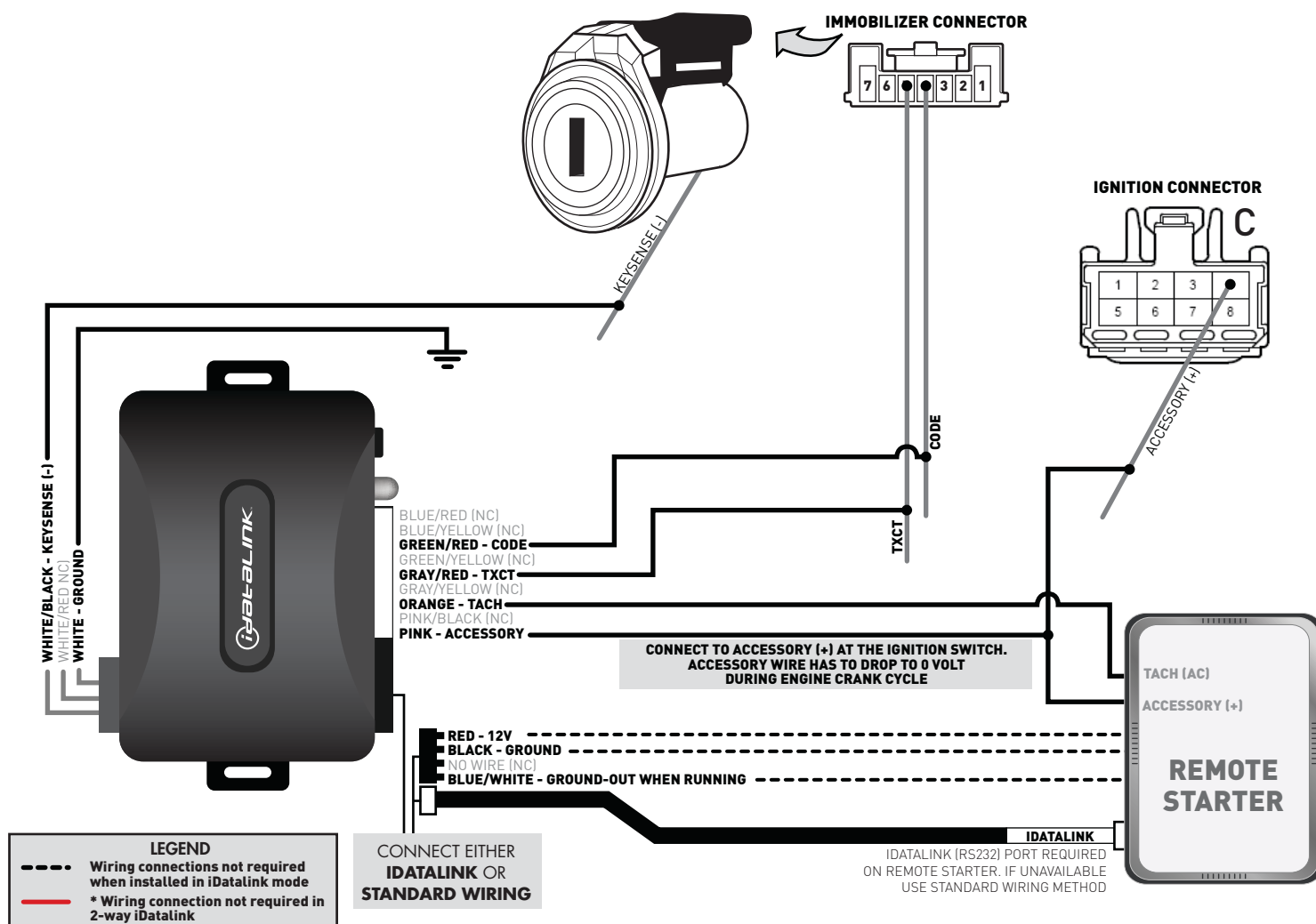
### TYPE 4 - WIRING DIAGRAM



### TYPE 5 - WIRE CROSS REFERENCE CHART

MAKE	MODEL	YEAR	CODE		TXCT		KEYSENSE	ACCESSORY	
			POSITION	WIRE COLOR	POSITION	WIRE COLOR	WIRE COLOR	POSITION	WIRE COLOR
TOYOTA	Highlander Hybrid	06-07	4	Gray	5	LtBlue	Green	C4	Green
LEXUS	RX 400 Hybrid	06-08	4	LtGreen	5	Brown	Black	C4	Green

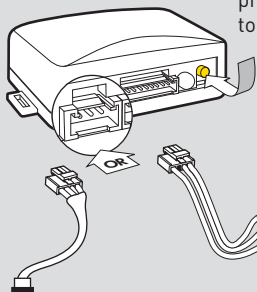
### TYPE 5 - WIRING DIAGRAM



## INSTALLATION MODE SELECTION

1

**PRESS AND RELEASE**  
programming button  
to **select installation mode.**



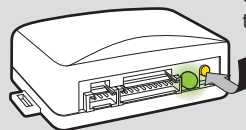
**Remote Starter  
Data Mode**  
LED flashes once



**Remote Starter  
Standard Mode**  
LED flashes twice

2

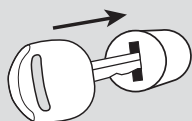
**PRESS AND HOLD**  
programming button  
until LED turns solid GREEN  
to **register selection.**



After registration, follow Factory Reset Procedure to change installation mode and restart this procedure.

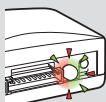
## TYPE 1, 2 & 5 - MODULE PROGRAMMING PROCEDURE - REGULAR KEY

1



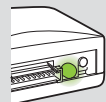
Insert key into ignition.  
(OR insert key into keyport)

2



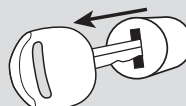
LED will flash GREEN and RED.

3



Wait, LED will turn solid GREEN  
for **2 seconds.**

4



Remove key.  
(OR remove key from keyport)

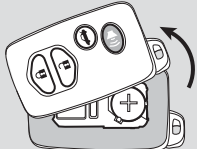
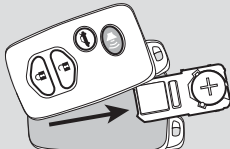
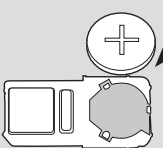
5

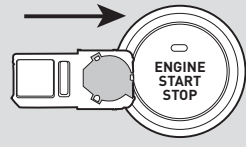
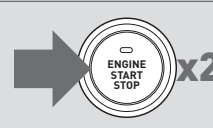
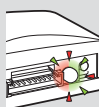
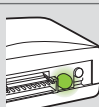

Module Programming  
Procedure completed.

### TYPE 3 - MODULE PROGRAMMING PROCEDURE - SMARTKEY PUSH TO START

#### NOTE

- I When programming, only one key fob will be used. The other one must be located at least 10 feet away from the vehicle.

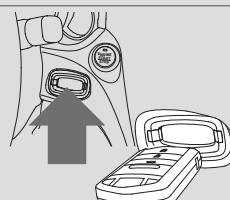
- 1  Open key fob.
- 2  Remove circuit board from key fob.
- 3  Remove battery from circuit board.

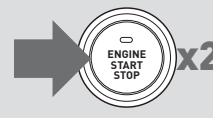
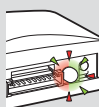
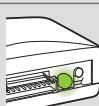

- 4  Place circuit board in front of push to start button.
- 5  Push start button twice [2x] to ON position.
- 6  LED will flash GREEN and RED.
- 7  Wait, LED will turn solid GREEN for **2 seconds**.
- 8  Module Programming Procedure completed.

### TYPE 4 - MODULE PROGRAMMING PROCEDURE - NON-RFID PUSH TO START

#### NOTE

- I When programming, only one key fob will be used. The other one must be located at least 10 feet away from the vehicle.

- 1  Insert keyfob in keyport.

- 2  Push start button twice [2x] to ON position.
- 3  LED will flash GREEN and RED.
- 4  Wait, LED will turn solid GREEN for **2 seconds**.
- 5  Module Programming Procedure completed.

### IDENTIFY VEHICLE YEAR

1

Locate the Vehicle Identification Number (VIN) and identify the 10th character.



2

Match the VIN's 10th character to its corresponding year.

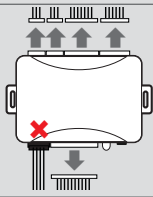
L → 1990	S → 1995	Y → 2000	5 → 2005	A → 2010
M → 1991	T → 1996	1 → 2001	6 → 2006	B → 2011
N → 1992	V → 1997	2 → 2002	7 → 2007	C → 2012
P → 1993	W → 1998	3 → 2003	8 → 2008	D → 2013
R → 1994	X → 1999	4 → 2004	9 → 2009	E → 2014

### MODULE DIAGNOSTICS

LED STATUS	DIAGNOSTICS		
	DURING PROGRAMMING	DURING REMOTE START	WITH IGNITION OFF
Flashing RED	Missing/wrong information from firmware or vehicle	Incorrectly programmed	Incorrectly programmed or connected
Solid RED	Waiting for more vehicle information	Incorrectly programmed	Not programmed waiting for more vehicle information
Flashing GREEN	Additional steps required to complete programming	Correctly programmed and operational	False ground when running status from remote starter
Solid GREEN then OFF	Correctly programmed	Reset in progress	Reset in progress
OFF	No activity or already programmed	Invalid ground when running status from remote starter	At rest and ready for a remote start sequence

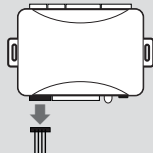
### FACTORY RESET PROCEDURE

1



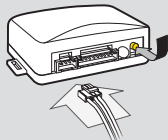
**DISCONNECT** all connectors from module **EXCEPT** the black 4-PIN standard or optional data connector.

2



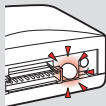
**DISCONNECT** black 4-PIN standard or optional data connector.

3



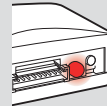
**PRESS AND HOLD** programming button while connecting either 4-PIN standard or optional data connector.

4



When LED flashes red, **RELEASE** programming button.

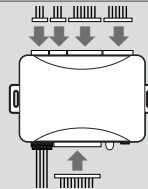
5



LED will turn solid red for 2 seconds.

**RESET COMPLETED.**

6



**RECONNECT** all connectors.

7

Repeat programming procedure.



Failure to follow procedure may result with a DTC or a CHECK ENGINE error message.

## PUSH TO START VEHICLE TAKE OVER PROCEDURE - TO THE VEHICLE OWNER

### NOTE

- I This procedure is to be followed during remote starter runtime prior to entering vehicle.
- II Do not attempt to remote start the vehicle when the OEM RFID FOB's are in the vehicle.



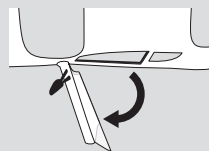
**TIME RESTRICTION COMING UP !**

**1**



Press UNLOCK on after-market remote.

**2**



### TIME RESTRICTION

Within 45 SECONDS from previous step:

Open vehicle door.

Enter vehicle.

Press and release BRAKE pedal.



**3**

Push to Start vehicle take over procedure completed.



Failure to follow procedure within time restriction will result in vehicle engine shutdown.