



# 1-Way Model: 3606

## Security System

## Installation Guide

This product is intended for installation by a professional installer only! Attempts to install this product by a person other than a trained professional may result in severe damage to a vehicle's electrical system and components.

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The Bitwriter® (P/N 998U) requires chip version 2.7 or newer to program this unit.

Bitwriters with a date code of 6A or older require an IC upgrade (P/N 998M). Some Bitwriters with a date code of 6B do not require the IC upgrade, refer to *Tech Tip #1112* for more information.



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## Warning! Safety First

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The following safety warnings must be observed at all times:

- Due to the complexity of this system, installation of this product must only be performed by an authorized Directed dealer.
- When properly installed, this system can start the vehicle via a command signal from the remote control. Therefore, never operate the system in an area that does not have adequate ventilation.

The following precautions are the sole responsibility of the user; however, authorized Directed dealers should:

- Never use a test light or logic probe when installing this unit. Always use a multimeter.
- Never operate the system in an enclosed or partially enclosed area without ventilation (such as a garage).
- When parking in an enclosed or partially enclosed area or when having the vehicle serviced, the remote start system must be disabled using the installed toggle switch. It is the user's sole responsibility to properly handle and keep out of reach from children all remote controls to assure that the system does not unintentionally remote start the vehicle.
- USER MUST INSTALL A CARBON MONOXIDE DETECTOR IN OR ABOUT THE LIVING AREA ADJACENT TO THE VEHICLE. ALL DOORS LEADING FROM ADJACENT LIVING AREAS TO THE ENCLOSED OR PARTIALLY ENCLOSED VEHICLE STORAGE AREA MUST REMAIN CLOSED AT ALL TIMES.

Use of this product in a manner contrary to its intended mode of operation may result in property damage, personal injury, or death. Except when performing the Safety Check outlined in this installation guide, (1) Never remotely start the vehicle with the vehicle in gear, and (2) Never remotely start the vehicle with the keys in the ignition. The user is responsible for having the neutral safety feature of the vehicle periodically checked, wherein the vehicle must not remotely start while the car is in gear. This testing should be performed by an authorized Directed dealer in accordance with the Safety Check outlined in this product installation guide. If the vehicle starts in gear, cease remote start operation immediately and consult with the user to fix the problem immediately.

After the remote start module has been installed, test the remote start module in accordance with the Safety Check outlined in this installation guide. If the vehicle starts when performing the Neutral Safety Shutdown Circuit test, the remote start unit has not been properly installed. The remote start module must be removed or properly reinstalled so that the vehicle does not start in gear. All installations must be performed by an authorized Directed dealer.

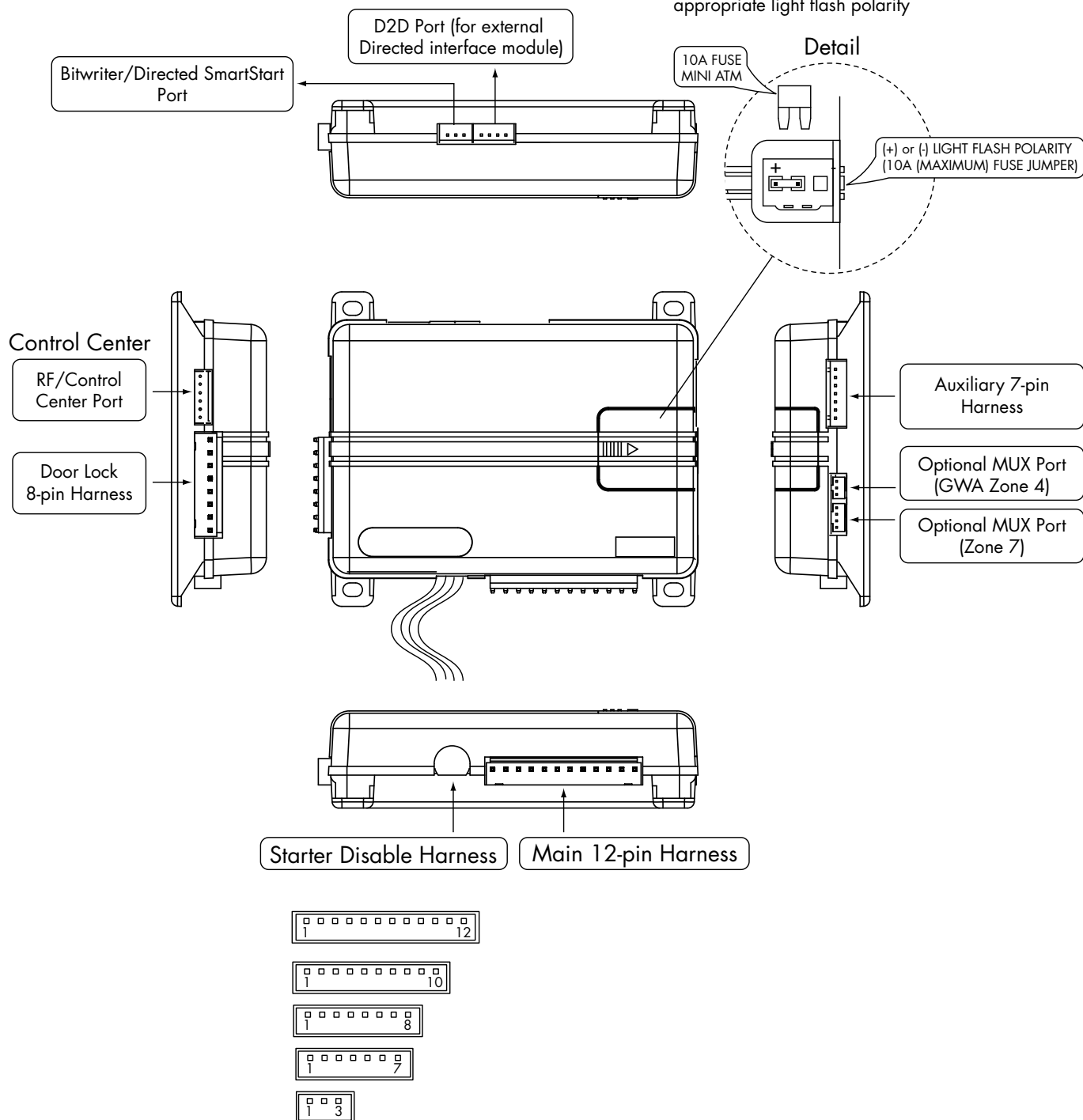
OPERATION OF THE REMOTE START MODULE IF THE VEHICLE STARTS IN GEAR IS CONTRARY TO ITS INTENDED MODE OF OPERATION. OPERATING THE REMOTE START SYSTEM UNDER THESE CONDITIONS MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY. IMMEDIATELY CEASE THE USE OF THE UNIT AND REPAIR OR DISCONNECT THE INSTALLED REMOTE START MODULE. DIRECTED WILL NOT BE HELD RESPONSIBLE OR PAY FOR INSTALLATION OR REINSTALLATION COSTS.

Remote starters for manual transmission pose significant risks if not properly installed and operated. When testing to ensure the installation is working properly, only remote start the vehicle in neutral gear, on a flat surface and with a functional, fully engaged parking brake. Do not allow anyone to stand in front of or behind the vehicle.

This product should **not** be installed in any convertible vehicles, soft or hard top with a manual transmission. Installation in such vehicles may pose certain risk.

# Wiring Diagram

**Note:** Fuse is under the plastic cover and needs to be installed for the appropriate light flash polarity



## Wiring Connections

### Main Harness, White 12-pin connector

1	RED/WHITE	(-) 200mA AUX/TRUNK RELEASE OUTPUT
2	RED	(+) 12VDC CONSTANT INPUT
3	BROWN	(+) SIREN OUTPUT
4	WHITE/BROWN	PARKING LIGHT ISOLATION WIRE - #87a of onboard relay
5	BLACK	(-) CHASSIS GROUND
6	VIOLET	(+) DOOR TRIGGER INPUT
7	BLUE	(-) TRUNK PIN/ INSTANT TRIGGER INPUT (Programmable N/O or N/C)
8	GREEN	(-) DOOR TRIGGER INPUT (Programmable N/O or N/C)*
9	BLACK/WHITE	DOME LIGHT SUPERVISION/FLEX RELAY (Programmable) OUTPUT
10	WHITE/BLUE	(-) 200mA AUX 1 OUTPUT
11	WHITE	PARKING LIGHT OUTPUT
12	ORANGE	(-) 500mA (GWA) GROUND WHEN ARMED OUTPUT

- \* When using the N/C (Normally Closed) setting, this wire only covers one door. Use AUX (Auxiliary) outputs 2, 3 or 4 (as necessary) programmed as N/C door switch inputs (wired to each individual door of the vehicle) to cover the other doors. The auxiliary outputs are also programmable as N/O (Normally Open) door switch inputs so you can connect multiple doors without the use of diodes. When the auxiliaries are programmed for these types of circuits and connected to the vehicle, the alarm reports a door violation when triggered.

**Important:** NEVER connect the 200mA low current outputs directly to a motor or high current device WITHOUT a relay.

### Door Lock Harness, White 8-pin connector

1	VIOLET*	UNLOCK #87 NORMALLY OPEN (INPUT)
2	BLUE/BLACK	UNLOCK #30 COMMON (OUTPUT)
3	BROWN/BLACK	UNLOCK #87a NORMALLY CLOSED
4	VIOLET/BLACK*	LOCK #87 NORMALLY OPEN (INPUT)
5	GREEN/BLACK	LOCK #30 COMMON (OUTPUT)
6	WHITE/BLACK	LOCK #87a NORMALLY CLOSED
7	WHITE/VIOLET**	DOME LIGHT SUPERVISION FLEX RELAY #87 NORMALLY OPEN (INPUT)
8	WHITE/BROWN**	FLEX RELAY #87a NORMALLY CLOSED

- \* Violet and Violet/Black are common at the fuse holder.

- \*\* These wires work in conjunction with the 12-pin Black/White wire. The White/Violet determines what the polarity of the 12-pin Black/White wire will be and the White/Brown will only be used if a five wire isolation circuit is required.

### Auxiliary Harness, White 7-pin connector

1	ORANGE/BLACK	(-) 200mA AUX 4 OUTPUT
2	WHITE/BLACK	(-) 200mA AUX 3 OUTPUT
3	VIOLET/BLACK	(-) 200mA AUX 2 OUTPUT
4	LIGHT GREEN/BLACK	(-) 200mA FACTORY ALARM DISARM OUTPUT
5	YELLOW	(+) IGNITION INPUT
6	BROWN	(-) 200mA HORN HONK OUTPUT
7	GRAY	(-) HOOD PIN INPUT (Programmable N/O or N/C)

**Important:** NEVER connect the 200mA low current outputs directly to a motor or high current device WITHOUT a relay.

### ***Starter Disable Harness, White 3-pin connector***

1	GREEN/WHITE	STARTER - COMMON (KEY SIDE)
2	GREEN	STARTER - NORMALLY OPEN (MOTOR SIDE)
3	GREEN/BLACK	STARTER - NORMALLY CLOSED (MOTOR SIDE)

### ***Sensor MUX Harness, Green 3-pin connector***

1	RED	+12V DC TO SENSOR
2	BLACK	GND TO SENSOR
3	BLUE/WHITE	MUX WIRE INPUT

### ***D2D Harness, Red 4-pin connector***

1	BLUE	D2D - TX
2	BLACK	(-) GROUND
3	GREEN	D2d - RX
4	RED	(+) 12V

### ***Bitwriter/Directed SmartStart Harness, Black 3-pin connector***

1	RED	(+) 12V
2	ORANGE	ESP 2 - RX/TX
3	BLACK	(+) 12V

## ***Wire Descriptions***

### ***Main Harness, 12-pin connector***

Red/White: (-) AUX/TRUNK RELEASE OUTPUT

This (-) 200mA output is often used to operate a trunk/hatch release or other relay-driven functions. When the system receives the command controlling trunk release (for longer than 1.5 seconds) the Red/White wire will supply an output as long as the transmission continues. This output can also be programmed as an OEM Alarm Arm or as a 2nd Unlock output (see *AUX/Trunk Output Type* in Feature Menus for more details).

**Important:** Never connect the 200mA low current outputs directly to a motor or high current device WITHOUT a relay.

Red: (+) 12V CONSTANT INPUT

This wire supplies power to the unit's micro-controller. Remove the supplied fuse before connecting to the (+) terminal of the battery or another constant +12V supply. Make sure to replace the fuse once all connections have been made.

**Note:** Always use a fuse within 12 inches of the point from which you obtain (+) 12V. Do not use the 15A use in the harness for this purpose. This fuse protects the module only.

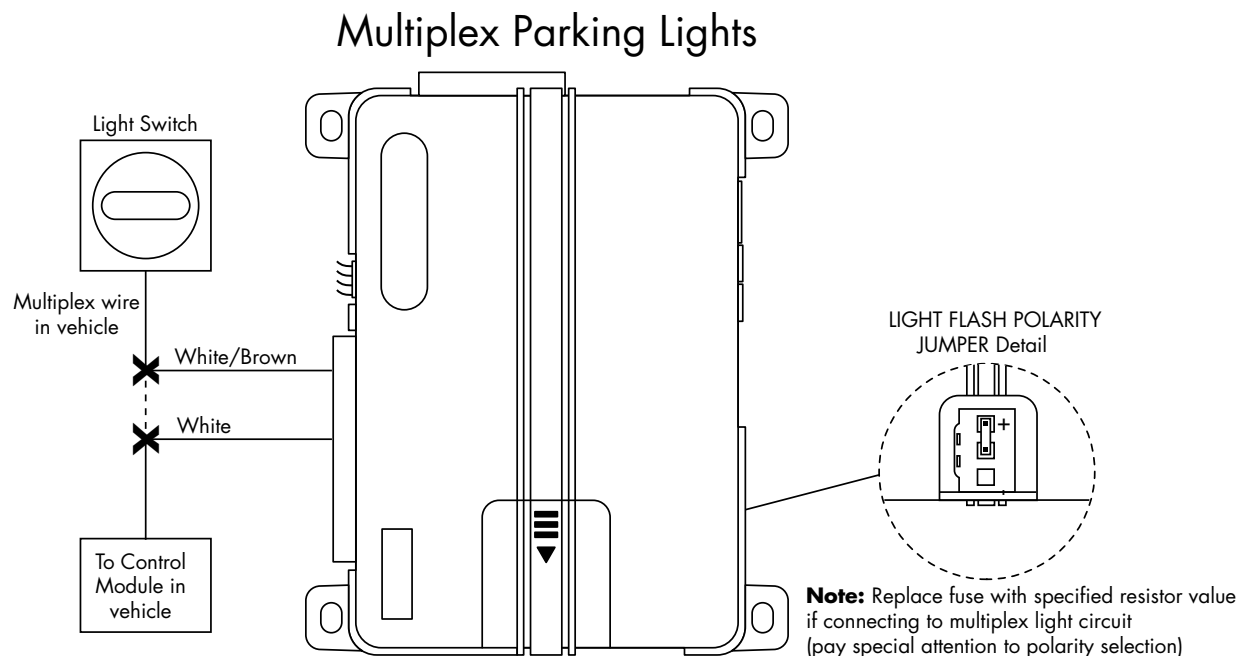
Brown: (+) SIREN OUTPUT

This wire is the (+) output for the siren. This wire connects to the (+) input of the siren.

White/Brown: PARKING LIGHTS FLASH ISOLATION WIRE (#87a of onboard relay)

This wire is a parking lights flash input from the vehicle light switch which connects to pin #87a of the onboard lights flash relay. It is used for vehicles requiring light switch isolation during parking lights flash output.

For vehicles with multiplex light circuits which require a resistor, the onboard lights flash fuse can be replaced with the specified resistor value (pay attention to appropriate circuit polarity). See the following diagram for wiring information.



#### Black: (-) CHASSIS GROUND

This wire is the unit's source of ground. **DO NOT** connect this wire to any factory ground points; they can cause noise and/or voltage drops which can affect system performance. Ground the unit and any accessories to the same point in the vehicle (preferably the kick panel). Scrape away any paint and make your own ground with a screw and a star washer.

#### Violet: (+) DOOR TRIGGER INPUT

This input wire is used in vehicles with (+) door trigger circuit and will sound the alarm when any of the vehicle's doors are opened.

#### Blue: (-) TRUNK TRIGGER/INSTANT TRIGGER INPUT N/O (Normally Open) OR N/C (Normally Closed)

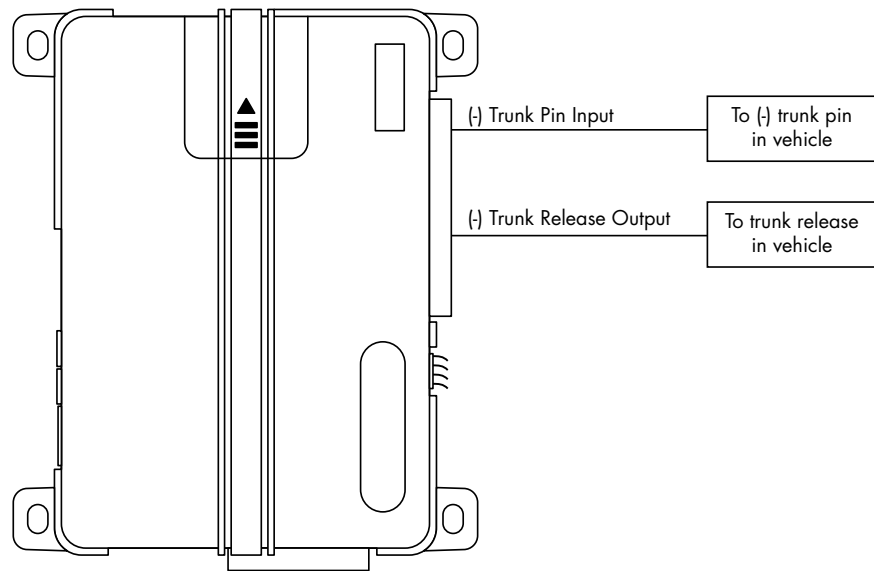
This input wire comes factory set for use in vehicles with a (-) trunk trigger circuit and will sound the alarm when the vehicle's trunk is opened. It can also be used as an instant trigger input for use with a Directed single zone sensor. This wire can be programmed for a N/O (Normally Open) or N/C (Normally Closed) circuit.

N/O = rests at ground when the trunk is OPEN, N/C = rests at ground when the trunk is CLOSED.  
(see *Trunk Switch Type* in Feature Menus for more details).

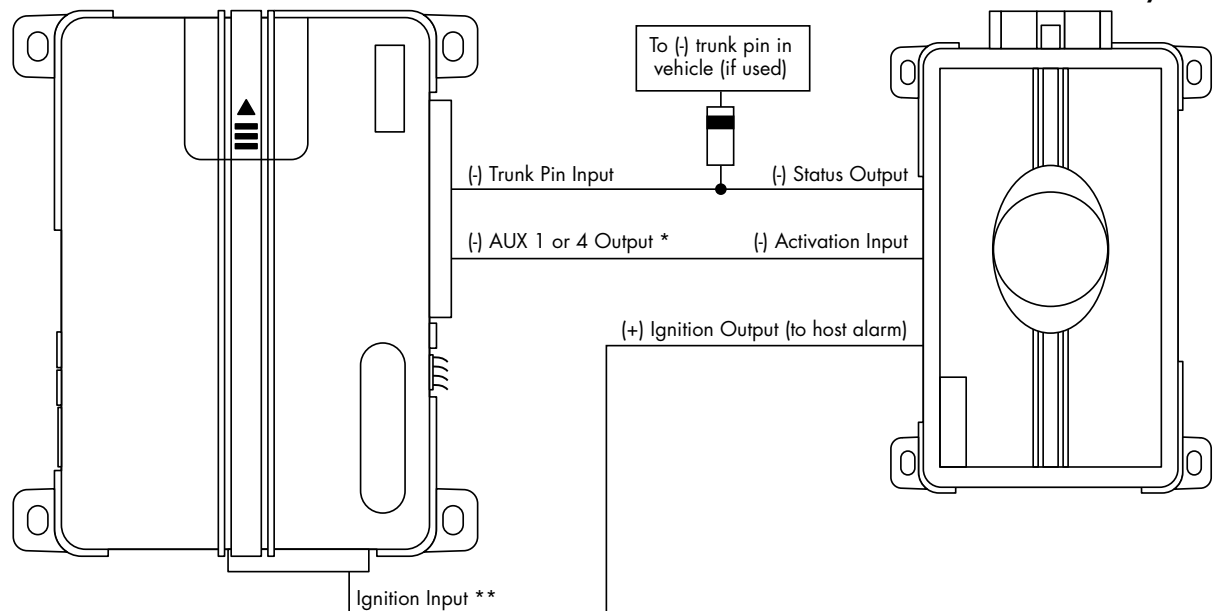
**Note:** There are times when you need to temporarily bypass all sensor inputs to the unit, such as when activating the trunk release or when adding an optional remote start to the system. Anytime an auxiliary output is used, all trigger inputs (except the door trigger input) are bypassed for 5 seconds. During the 5 second period, if the system receives a (-) ground on the 12-pin Blue trunk trigger input wire, all trigger inputs will remain bypassed until 5 seconds after the ground is removed from the Trunk trigger input wire. Refer to the following diagrams for wiring/programming information.



## Trunk Release Sensor Shunt



## Remote Start Sensor Shunt



\* AUX 1 or 4 must be programmed as Remote Start Report (see *AUX 1 or AUX 4 Output Type* in Feature Menus for more details).

\*\* Do not connect the ignition input of the system to the vehicle, connect to the Ignition Output of an add-on Directed Remote Start System.

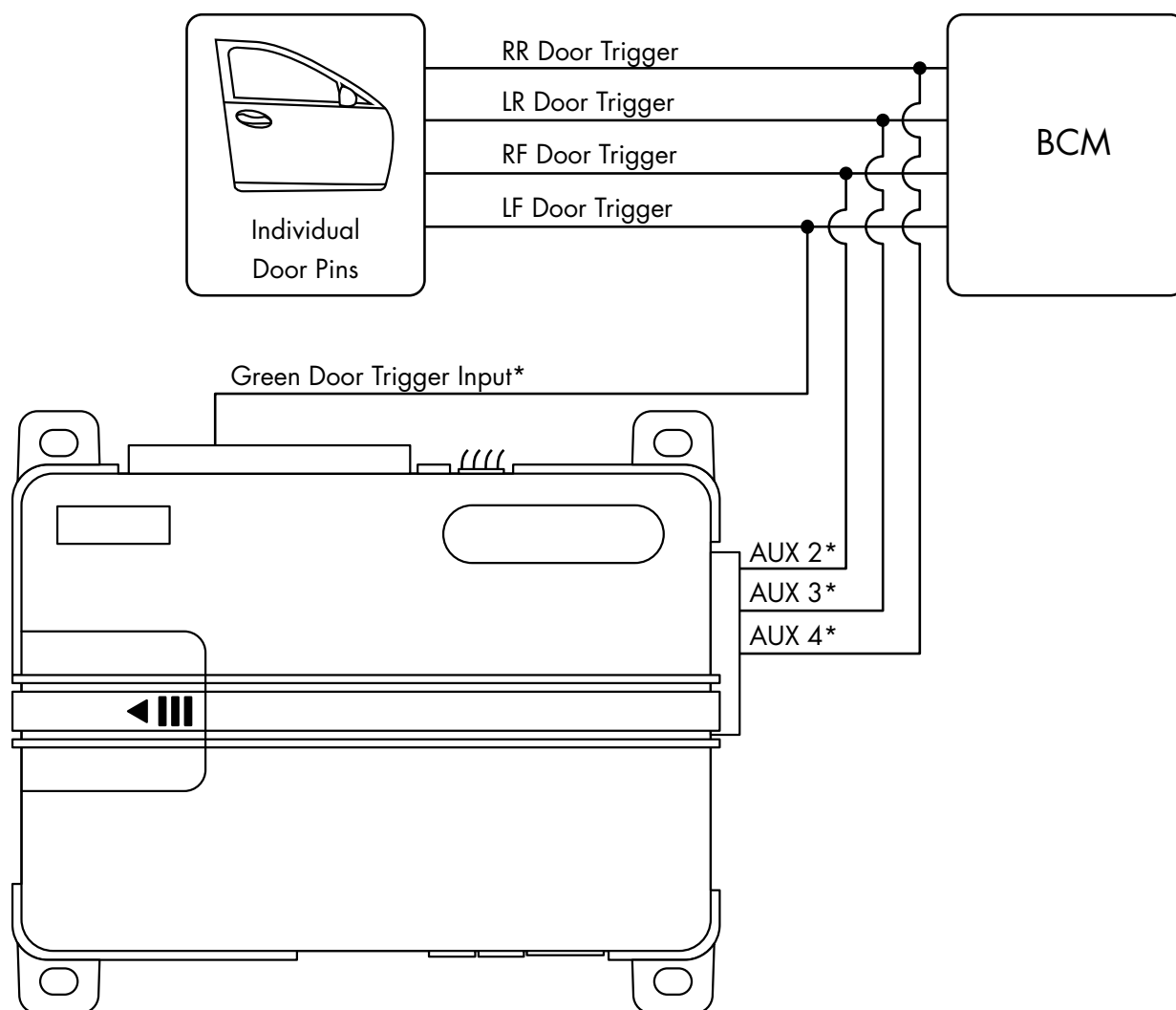
Green: (-) DOOR TRIGGER INPUT (N/O OR N/C)

This input wire comes factory set for use in vehicles with (-) door trigger circuit and will sound the alarm when any of the vehicle's doors are opened. This wire can be programmed for a N/O (Normally Open) or N/C (Normally Closed) circuit.

N/O = rests at power or ground when the door is OPEN, N/C = rests at power or ground when the door is CLOSED, (see *Door Switch Type* in Feature Menus for more details).

**Note:** This wire can only monitor one door when used in a Normally Closed circuit if all doors want to be connected to individually, use AUX 2-4 outputs and refer to AUX Output Type in the Feature Menus for programming to work with Normally Closed Door Trigger circuits. Refer to the following diagram for wiring information.

## N/C (Normally Closed) Door Triggers



\* Default is N/O and must be programmed for N/C when connecting to Normally Closed door trigger circuits.

#### Black/White: DOME LIGHT/FLEX RELAY OUTPUT

This wire is pin #30 of the onboard Dome Light/Flex Relay and works in conjunction with the White/Violet (pin #87) and the White/Brown (pin #87a) wires on the 8-pin Door Lock Harness.

This output is default to drive the dome light circuit in the vehicle. This output activates when disarming/unlocking the system and when turning the ignition OFF in the vehicle (for programmable ON/OFF ignition controlled dome light (see *Ign-controlled Dome Light* in Feature Menus for more details). The Flex Relay can also be programmed as a Horn Honk or Trunk Release output (see *Flex Relay* in Feature Menus for more details).

#### White/Blue: (-) AUXILIARY 1 OUTPUT

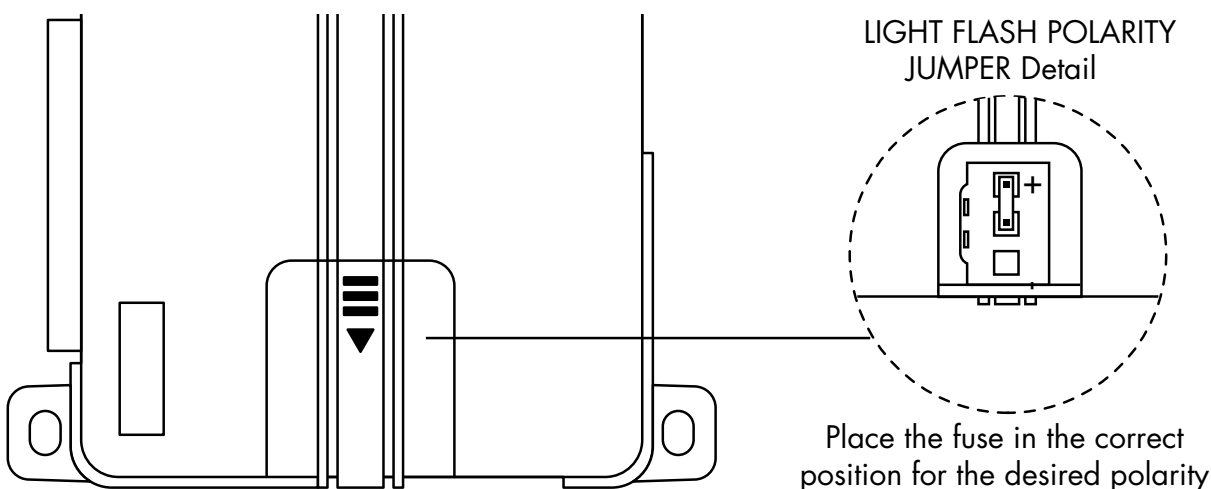
This (-) 200mA output is used for controlling any auxiliary function such as fuel door release or a window module. This output can be programmed for different applications. (see *AUX 1 options* in Feature Menus for more details).

**Important:** Never connect the 200mA low current outputs directly to a motor or high current device WITHOUT a relay.

#### White: (+) or (-) PARKING LIGHTS OUTPUT

This wire should be connected to the parking lights wire in the vehicle. It activates when the system is armed/disarmed and when the alarm is triggered. It can be set for a (-) or (+) output. See the following diagram for setting the lights flash polarity.

### (+) Parking Lights



#### Orange: (-) GWA (GROUND WHEN ARMED OUTPUT)

This wire supplies a (-) 500mA ground output as long as the system is armed. This output ceases as soon as the system is disarmed. The GWA can be hooked up to a voice module or any accessory which requires a ground when armed.

## Door Lock Harness, 8-pin connector

Identifying the Door Lock System - Refer to Directed *Tech Tip #1041: Door Locking Systems Wiring Guide* for more information. This system has onboard door lock relays and can be interfaced with most power door lock systems drawing 15 amps or less.

Violet: UNLOCK RELAY PIN #87 (POLARITY INPUT)

This wire determines the polarity of the Blue/Black unlock output wire.

**Note:** This wire is connected to the Violet/Black Lock Relay Input wire, the connection is made at the fuse holder.

Blue/Black: UNLOCK RELAY PIN #30 (OUTPUT)

This wire connects to the door unlock circuit in the vehicle. It can be programmed to unlock the vehicle when the ignition is turned OFF, for a double pulse output and for output duration (see *Ign-controlled Locks*, *Door Lock Pulses* or *Door Lock Duration* in Feature Menus for more details).

Brown/Black UNLOCK RELAY PIN #87A (ISOLATION WIRE)

This wire connects to the switch side of a 5-wire door unlock circuit.

Violet/Black: LOCK RELAY PIN #87 (POLARITY INPUT)

This wire determines the polarity of the Green/Black lock output wire.

**Note:** This wire is connected to the Violet Unlock Relay Input wire, the connection is made at the fuse holder.

Green/Black: LOCK RELAY PIN #30 (OUTPUT)

This wire connects to the door lock circuit in the vehicle. It can be programmed to lock the vehicle when the ignition is turned ON, for a double pulse output and for output duration. Additionally this output may be used for Comfort Closure for vehicles which can close the windows (and in some cases the sunroof) while holding the key to the lock position in the door key cylinder (see *Ign-controlled Locks*, *Door Lock Pulses*, *Door Lock Duration* or *Comfort Closure* in Feature Menus for more details).

**Note:** The doors of the vehicle must be closed when turning the ignition ON for the ignition controlled door lock feature to work.

White/Black: LOCK RELAY PIN #87A (ISOLATION WIRE)

This wire connects to the switch side of a 5-wire door lock circuit.

White/Violet: DOME LIGHT/FLEX RELAY POLARITY INPUT

This wire is pin #87 of the onboard Dome Light/Flex Relay and works in conjunction with the White/Brown (pin #87a) and the Black/White (pin #30) wires on the 8-pin Door Lock Harness and 12-pin Main Harness. This input is used to determine the polarity output of the Black/White wire from the 12-pin Main Harness. The Flex Relay activates when disarming/unlocking the system and when turning the ignition OFF in the vehicle (for programmable ON/OFF ignition controlled dome light see *Ign-controlled Dome Light* in Feature Menus for more details). The Flex Relay can also be programmed as a Horn Honk or Trunk Release output (see *Flex Relay* in Feature Menus for more details).

White/Brown: DOME LIGHT/FLEX RELAY ISOLATION WIRE

This wire is pin #87a of the onboard Dome Light/Flex Relay and works in conjunction with the White/Violet (pin #87) and the Black/White (pin #30) wires on the 8-pin Door Lock Harness and 12-pin Main Harness. This wire is used to isolate the dome light circuit in the vehicle and is typically used for 5-wire circuit. This relay activates when disarming/unlocking the system and when turning the ignition OFF in the vehicle (for programmable ON/OFF ignition controlled dome light see *Ign-controlled Dome Light* in Feature Menus for more details). The Flex Relay can also be programmed as a Horn Honk or Trunk Release output (see *Flex Relay* in Feature Menus for more details).

## **Auxiliary Harness, 7-pin connector**

Orange/Black: (-) AUXILIARY 4 OUTPUT/INPUT

This (-) 200mA output is used for controlling any auxiliary function such as fuel door release or a window module. This output can be programmed for different applications including a N/O or N/C door trigger input. (see the *AUX 4 Output Types* in Feature Menus for more details).

White/Black: (-) AUXILIARY 3 OUTPUT/INPUT

This (-) 200mA output is used for controlling any auxiliary function such as fuel door release or a window module. This output can be programmed for different applications including a N/O or N/C door trigger input. (see the *AUX 3 Output Types* in Feature Menus for more details).

Violet/Black: (-) AUXILIARY 2 OUTPUT/INPUT

This (-) 200mA output is used for controlling any auxiliary function such as a fuel door release or a window module. This output can be programmed for different applications including a N/O or N/C door trigger input. (see the *AUX 2 Output Types* in Feature Menus for more details).

Green/Black: (-) FACTORY ALARM DISARM OUTPUT

This 200mA output is used to disarm the factory alarm and triggers when the system is disarmed and when activating the trunk release output. It typically connects to the Factory Alarm Disarm wire in the vehicle. This output can be programmed to activate with unlock, trunk release and for a single or double pulse output (see *OEM alarm Disarm Options* in Feature Menus for more details).

Yellow: (+) IGNITION INPUT

Connect this wire to the (+) 12V ignition wire in the vehicle. This wire must show (+) 12V with the key in RUN position and during cranking. Take care to insure that this wire cannot be shorted to the vehicle chassis at any point. If you are adding a remote start to the system, the ignition input will not be connected to the vehicle instead it will connect to the host system ignition output of the remote start (see the *Remote Start Sensor Shunt* diagram on page 9 for wiring information).

Brown: (-) HORN HONK OUTPUT

This wire supplies a (-) 200mA output which can be used to honk the vehicle's horn. This output pulses when the alarm has been panicked or triggered. This output can be programmed to operate similar to the siren output wire, it will generate a single pulse when lock the doors with the remote, and two pulses when unlocking with the remote. (see *Horn Function* in Feature Menus for more details).

Gray: HOOD TRIGGER INPUT (N/O OR N/C)

This input wire is default for use in vehicles with a (-) hood trigger circuit and will sound the alarm when the vehicle's hood is opened. This wire can be programmed for a N/O (Normally Open) N/C (Normally Closed) circuit.

N/O = rests at power or ground when the hood is OPEN, N/C = rests at power or ground when the hood is CLOSED. (see *Hood Switch Type* in Feature Menus for more details).

## **Starter Disable Harness, 3-pin connector**

Green/White: STARTER DISABLE RELAY COMMON PIN #30

This wire will be used in both the Normally Closed and Normally Open type of starter disable setups. This wire connects to the Ignition Switch side of the cut starter wire in the vehicle.

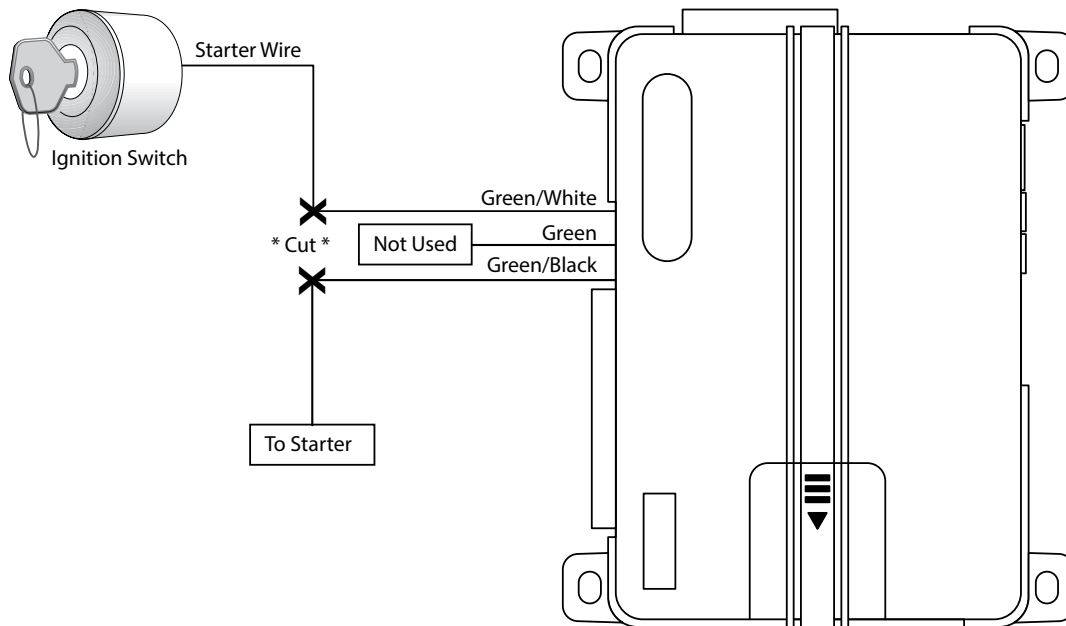
Green: STARTER DISABLE RELAY NORMALLY OPEN PIN #87

This wire will be used in the Normally Open type of starter disable setup. This wire connects to the car side of the cut starter wire in the vehicle. In the normally open setting, the vehicle cannot be started if the system does not have power

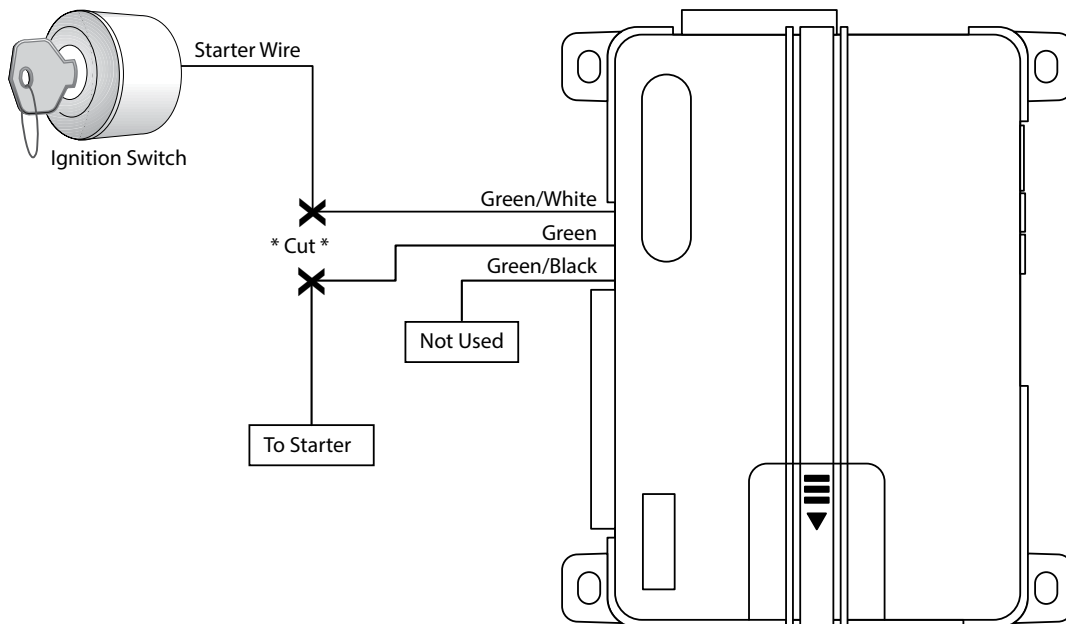
Green/Black: STARTER DISABLE RELAY NORMALLY CLOSED PIN #87a

This wire will be used in the Normally Closed type of starter disable setup. This wire connects to the car side of the cut starter wire in the vehicle. In the normally closed setting, the vehicle can be started if the system does not have power.

## Normally Closed Starter Disable



## Normally Open Starter Disable



## Sensor MUX Harness, 3-pin connector

Red: (+) 12v TO SENSOR

This wire supplies a constant (+) 12v to an additional sensor.

Black: GWA TO SENSOR

This wire supplies a (-) to an additional sensor and does not activate until the system is armed, similar to the Orange Ground When Armed wire on the 12-pin harness. This wire works well for tilt sensors that require a Ground When Armed or any sensor that you want to activate only while the system is armed.

Blue/White: (-) MUX (MULTIPLEX INPUT)

This input will work with Directed single stage or dual stage sensors. Inputs shorter than 0.8 seconds will trigger the Warn Away response, while inputs longer than 0.8 seconds will trigger the full alarm sequence. If installing a Directed dual stage sensor, connect both the Warn Away and full trigger wires of the sensor to this input.




## Adjusting the Doubleguard Shock Sensor

**Note:** When adjusting the on board Doubleguard shock sensor, the main unit must be in the final mounting location that it will be in after the install is complete. Adjusting the sensor and then relocating the main unit will require readjustment.

**Note:** The siren will emit 1 short and 1 long sound when maximum/minimum sensitivity is reached. At minimum sensitivity level, the impact sensor is turned OFF.

**Note:** After each adjustment the sensitivity can be tested by cautiously impacting the vehicle with increasing intensity. The siren will chirp to indicate the impact level required to fully trigger the alarm.





### Adjustment using the optional 2-way LCD remote control:

1. With the main unit mounted in its permanent location, make sure the system is disarmed with the ignition OFF and all entry points on the vehicle are closed.
2. **Press** and **hold** the **f** button of the remote control until a long beep is emitted and **Main Menu** is displayed. (if programmed to operate two systems, ignore the car 1 or car 2 text and beeps at 3 seconds).
3. **Release** the **f** button to view the main menu. **Setup Remote** is displayed.
4. **Press** and **release** the  button. **Sensor Adjust** is displayed.
5. **Press** and **hold** the **f** button until a long beep is emitted and the siren emits a long chirp. The current sensitivity **Sen ##** is displayed, adjustment mode is ready.
6. Adjust the sensitivity:
  - a. **Press** and **release** the  and  buttons change the sensitivity.
  - b. **Press** and **hold** the **f** button. The adjustment is sent to the system and the remote control emits a long beep as confirmation.
  - c. **Release** the button.

### Exit adjustment mode:

- **Press** and **release** the **f** button anytime to exit adjustment mode, and then **press** and **hold** to return the remote control to normal operation (transmit LED turns OFF).
- **Open** the hood or trunk
- **Turn** the ignition ON
- Wait for 30 seconds between steps
- The siren will emit one long chirp when exiting adjustment mode.

### Adjustment using the optional 2-way LED or 1-way remote control:

1. Make sure the system is disarmed with the ignition OFF and all entry points on the vehicle are closed.
2. **Press** and **hold** the **f** button of the remote control for 8 seconds until the transmit LED turns ON then **release** it (If programmed to operate two systems, ignore the transmit LED flashes at three seconds).
3. **Press** and **hold** the  button until the transmit LED flashes OFF then ON and the siren emits a long chirp. Adjustment mode is ready.
4. Adjust the sensitivity:
  - **Press** and **release** the  button to increase the sensitivity. The siren chirps two times.
  - **Press** and **release** the  button to decrease the sensitivity. The siren chirps one time.
  - **Press** and **release** the  button to reset sensitivity to default setting. The siren chirps three times.

### Exit adjustment mode:

- **Press** and **release** the **f** button any time to exit adjustment mode, and then **press** and **hold** to return the remote control to normal operation (transmit LED turns OFF).
- **Open** the hood or trunk
- **Turn** the ignition ON
- Wait for 30 seconds between steps
- The siren will emit one long chirp when exiting adjustment mode.



## Pairing a Remote Control

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
Pairing a remote control is a process whereby the remote control and the system in the vehicle learn each other's encrypted identification, securing their communication from intruders. Please note the remote control(s) come already paired from the factory. These instructions can be used if reprogramming or adding a new remote control to the system. The following instructions steps you through pairing the 2-way (optional) and 1-way remote control(s).

**Note:** Both the remote control and the vehicle need to be setup to pair a remote to the system and the remote must be set to the desired Car1 or Car2 mode. (see *Owners Manual* for more details about selecting vehicles).

### LCD 2-Way Remote Control:

1. **Press** and **hold** the **f** button on the remote for 8 seconds, the remote beeps once, Main Menu is displayed on the screen. **Release** the **f** button.
2. **Press** and **release** the  button or the  button until Pair is displayed on the screen.
3. **Press** and **hold** the **f** button until the remote beeps 3 times then **release** the **f** button. The remote is now ready to pair with the system.


### Vehicle Setup for Pairing:

- **Open** the vehicle door.
  - **Turn** ON the vehicles ignition to the RUN position.
  - Within 5 seconds **press** and **release** the Control Center button on the Control Center one time then **press** it once more and **hold** it.
  - The Control Center LED begins flashing in a single flash pattern and the siren will chirp once to confirm the system is in pairing mode.
  - Now **release** the Control Center Button.
4. With both the remote and system in pairing mode, **press** the  button on the remote.
  5. The siren chirps to indicate the system has learned the remote ID and is sending its ID to the 2-way remote.
  6. The LCD remote control will indicate a Successful or Failed pairing. If pairing fails, the remote will go back to the Pair screen, **press** the  button on the remote again to attempt another pairing. Once the remote has paired to the system Successful will display on the remote screen and it will also emit several tones to confirm.



7. Once the pairing is completed turn OFF the ignition in the vehicle, the siren will sound to confirm exiting. When both the system and remote have exited the Pairing Mode, you may now test for functionality.




**To exit Pairing Mode on the remote:**

- Wait 30 seconds without pressing a button on the remote.
- **Press** and **release** the  button on the remote.



**To exit Pairing Mode on the system:**

- **Turn** OFF the ignition.
- **Close** the open door.
- Wait 60 seconds for the system to automatically exit.
- The siren will sound to confirm exiting.


**LED 2-way or 1-way Remote Control:**

1. **Press** and **hold** the  button on the remote for 8 seconds. The transmit LED on the remote will come ON solid, **release** the  button.
2. **Press** and **hold** the  button on the remote until the transmit LED flashes 3 times then comes ON solid. The remote is now ready to pair with the system.

**Vehicle Setup for Pairing:**

- **Open** at least 1 vehicle door.
  - **Turn** ON the vehicles ignition to the RUN position.
  - Within 5 seconds **press** and **release** the Control Center button on the Control Center one time then **press** it once more and **hold** it.
  - The Control Center LED will begins flashing in a single flash pattern and the siren will chirp once to confirm the system is in pairing mode. You may now **release** the Control Center Button.
3. With both the remote and system in pairing mode, **press** the  button on the remote. The siren chirps to indicate the system has learned the remote ID and is sending its ID to the 2-way remote (the 2-way remote will emit several tones to indicate the remote has learned the system ID, the 1-way remote does not offer confirmations).
  4. If pairing fails, **press** the  button on the remote again to attempt another pairing.
  5. Once the pairing is completed **turn** OFF the ignition in the vehicle, the siren will sound to confirm exiting. When both the system and remote have exited the Pairing mode, you may now test for functionality.





**To exit Pairing Mode on the remote:**

- Wait 30 seconds without pressing a button on the remote.
- **Press** and **release** the  button on the remote one time and **press** and **hold** again for 2 seconds, the transmit LED on the remote will shut OFF to confirm exiting.

**To exit Pairing Mode on the system:**

- **Turn** OFF the ignition.
- **Close** the open door.
- Wait 60 seconds for the system to automatically exit.
- The siren will sound to confirm exiting.

## Basic Remote Functions

Level Button	Direct Access	$f \times 1$ LEVEL 1	$f \times 2$ LEVEL 2	$f \times 3$ LEVEL 3	$f \times 4$ LEVEL 4
	Arm/Lock (Panic)	Silent Mode Arm	Sensor Bypass	Sensor Silent Arm	Full Silent Arm
	Disarm/Unlock	Silent Mode Disarm	Remote Valet	Car Finder	
	Remote Start*/AUX 1/4**				
	AUX/Trunk Release	AUX 1	AUX 2	AUX 3	AUX 4
$f$	Advance Level Change Car (Hold 3s), Enter programming (Hold 8s)		Arm Status (2-way only)		

\* Available only with optional Remote Start module installation

\*\* This button can command either AUX 1 or AUX 4 if turned ON by an authorized Directed dealer.

**Note:** See owner's guide of your specific model for exact functionality as some functions may differ to those shown above.

**Important:** If the Control Center has been replaced, all remote controls must be re-paired with the system.

## VRS (Vehicle Recovery System)

When VRS is enabled and the vehicle is stolen or carjacked, VRS sounds the siren and flashes the parking lights to persuade the thief to abandon the vehicle, and when the ignition is turned off, activates the starter disable to prevent the engine from restarting.

### To arm VRS:

- Perform the silent mode arm command while driving, or while the ignition is turned ON. The siren chirps and parking lights flash once to confirm arming. The arm LED and beeps play to confirm arming.

**Note:** If Valet mode is ON, the LED and fault tone plays, exit Valet mode before arming VRS.

- Once armed, VRS triggers if any door is opened then closed while the ignition is ON, and if the vehicle is parked while armed, VRS triggers when driving resumes. See trigger description below.
- When triggered, the Control Center LED begins flashing after fifteen seconds. Within 45 seconds perform the silent mode arm command to disarm VRS.

**Note:** If not disarmed, the siren begins chirping for 60 seconds and then becomes a constant siren blast with flashing parking lights for several minutes. This output will continue and be repeated each time the ignition is turned ON until VRS is disarmed.

### To disarm VRS:

- Perform the silent mode disarm command on the remote anytime before VRS has been triggered, or within one minute after it has triggered and before the siren begins to chirp.

**Note:** If not disarmed before the siren begins to chirp, the emergency override procedure must be used to disarm VRS. (see owners guide for override procedure).



## Programming System Features



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The System Features Learn Routine dictates how the unit operates. It is possible to access and change most of the feature settings using the Control Center button.

### Programming a System Feature:

1. **Open** a door.
2. **Turn** the ignition ON, then OFF.
3. Select a Menu. **Press** and **hold** the Control Center button. The number of siren chirps indicates the Menu number. 1 chirp indicates Menu 1, 2 chirps for Menu 2.
4. When the desired Menu chirps are heard, **release** the Control Center button.
5. Select a Feature. **Press** and **release** the Control Center button the number of times corresponding to the feature desired to change. Then **press** and **hold** one more time to select the feature. **Do not release** the Control Center button.
6. Program the Feature. While holding the Control Center button, program the feature using the remote control.

For features with only two options;  = option 1, while  = option 2.

For features with more than two options;  selects the options in ascending order, while  selects them in descending order.

**Note:** Pressing  button resets the feature to the factory default.

### Once a feature is programmed:

- Other features can be programmed within the same Menu.
- Another Menu can be selected.
- The Learn Routine can be exited if programming is complete.

### To access another feature in the same Menu:

1. **Press** and **release** the Control Center button the number of times necessary to advance from the feature just programmed to the next one desired to program.
2. Then **press** the Control Center button once more and **hold** it.

### To select another Menu:

1. **Press** and **hold** the Control Center button.
2. After 3 seconds, the unit advances to the next Menu, the siren chirps, indicating which menu has been accessed.

### The learn routine exits if any of the following occurs:

- The open door is closed.
- The ignition is turned ON.
- There is no activity for 30 seconds.
- The Control Center button is pressed too many times.

## Feature Menus

Default settings are **Opt. 1**.

### Menu 1 - Vehicle Integration

Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 5+
1	System Arming Mode	<b>Active</b>	Passive Arm – no lock	Passive Arm & lock	Auto Re-arm - no lock	Auto Re-arm & Lock
2	Panic Mode*	<b>ON</b>	Ignition OFF Only	OFF		
3	Confirmation Chirps	<b>ON - Warn Away chirps ON</b>	ON - Warn Away chirps OFF	OFF - Warn Away chirps ON	OFF - Warn Away chirps OFF	
4	Siren Duration (seconds)	<b>30 sec.</b>	60 sec.			
5	Ign-controlled Locks	<b>No Ign-locking</b>	Lock & Unlock	Lock Only	Unlock Only	
6	Door Lock Pulses	<b>Single</b>	Double Unlock Only	Double Lock Only	Double Lock & Unlock	
7	Door Lock Output Duration (seconds)	<b>0.8 sec.</b>	3.5 sec.	0.4 sec.		
8	Ignition-controlled 2nd Unlock**	<b>Delayed 2nd unlock ON/Ign-control after first unlock</b>	Immediate 2nd unlock ON/Ign-control after first unlock			
9	Comfort Closure*	<b>No Comfort Closure</b>	Comfort Closure 1	Comfort Closure 2		
10	Horn Function (milliseconds)	<b>Full Alarm Only</b>	Siren Function 20 ms	Siren Function 30 ms	Siren Function 40 ms	Siren Function 50 ms
11	Hood Switch type	<b>Normally Open</b>	Normally closed			
12	Trunk Switch Type	<b>Normally Open</b>	Normally Closed			
13	Door Switch Type	<b>Normally Open</b>	Normally Closed			
14	Starter Disable Type	<b>Normally Closed</b>	Normally Open			
15	Sensor Trigger	<b>Single Sensor</b>	Double sensor			
16	Nuisance Prevention	<b>ON</b>	OFF			
17	Flex Relay	<b>Domelight</b>	Horn	Trunk release		
18	VRS	<b>OFF</b>	ON - Disarm chirps OFF	ON - Disarm chirps ON		
19	Remote Button unlock (Ign OFF)*	<b>ON</b>	OFF			

\* Not available with the 1-way remote control.

\*\* Requires an AUX channel Output Type to be programmed as a 2nd Unlock output (see Menu 2).

#### 1. System Arming mode:

1. Active: the transmitter must be used to arm the system.
2. Passive Arm w/o lock: after exiting the vehicle the system will automatically arm. The doors will not lock.
3. Passive Arm w/lock: after exiting the vehicle the system will automatically arm and lock the doors.
4. Auto re-arm w/o lock: if the vehicle is not entered after receiving a disarm command, the system will automatically re-arm. The doors will not lock.
5. Auto re-arm w/lock: if the vehicle is not entered after receiving a disarm command, the system will automatically re-arm and lock the doors.

2. Panic Mode:
  1. ON: the Panic output can be activated at any time.
  2. Ign. OFF Only: the Panic output can be activated only when the ignition is OFF.
  3. OFF: the Panic output is defeated.
3. Confirmation Chirps:
  1. ON w/Warn Chirps ON: arm, disarm, and sensor Warn Away chirps are active.
  2. ON w/Warn Chirps OFF: arm and disarm chirps are active, Warn Away chirps are defeated.
  3. OFF w/Warn Chirps ON: arm and disarm chirps are defeated, Warn Away chirps are active.
  4. OFF w/Warn Chirps OFF: arm, disarm, and sensor Warn Away chirps are defeated.
4. Siren Duration:
  1. 30sec: the siren output duration for full trigger activations and Panic mode is 30 seconds.
  2. 60sec: the siren output duration for full trigger activations and Panic mode is 60 seconds.
5. Ign-controlled Locks:
  1. No Ign-locking: the door lock/unlock outputs will not activate when ignition is turned ON & OFF.
  2. Lock & Unlock: the door lock & unlock output will activate when ignition is turned ON & OFF.
  3. Lock Only: the door lock output will activate when ignition is turned ON.
  4. Unlock Only: the door unlock output will activate when ignition is turned OFF.
6. Door Lock Pulses:
  1. Single: the door lock & unlock outputs will pulse once.
  2. Double Unlock only: the unlock output only will pulse twice.
  3. Double Lock Only: the lock output only will pulse twice.
  4. Double Lock & Unlock: the lock & unlock outputs will pulse twice.
7. Door Lock Output Duration:
  1. 0.8 sec.: the door lock output pulses will be 800 milliseconds in duration.
  2. 3.5 sec.: the door lock pulses will be 3.5 seconds in duration.
  3. 0.4 sec.: the door lock pulses will be 400 milliseconds in duration.
8. Ignition Controlled 2nd Unlock:
  1. Delayed: for Ign-controlled unlocking, the 2nd Unlock will activate 800 milliseconds after the first (driver door) unlock.
  2. Immediate: for Ign-controlled unlocking, the 2nd Unlock will activate at the same time as the first (driver door) unlock.
9. Comfort Closure:
  1. No comfort Closure: Comfort Closure is defeated when arming.
  2. Comfort Closure 1: When arming, the door lock pulse (or 2nd pulse for double pulses) will remain ON for 20 seconds.
  3. Comfort Closure 2: When arming, 800 milliseconds following the end of the door lock pulse (or 2nd pulse for double pulses); the door lock output will turn ON again for 20 seconds.
10. Horn Function:
  1. Full Alarm Only: the horn output will pulse only during full trigger events.
  2. Siren Function 20/30/40/50 milliseconds: The horn output will emulate the siren output with selectable output timing to compensate for OEM horn inefficiency.

11. Hood Switch Type:
1. Normally Open: for vehicles with a hood switch that rests at power or ground when the hood is OPEN.
  2. Normally Closed: for vehicles with a hood switch that rests at power or ground when the hood is CLOSED.
12. Trunk Switch Type:
1. Normally Open: for vehicles with a trunk switch that rests at power or ground when the trunk is OPEN.
  2. Normally Closed: for vehicles with a trunk switch that rests at power or ground when the trunk is CLOSED.
13. Door Switch Type:
1. Normally Open: for vehicles with door switches that rest at power or ground when the door is OPEN.
  2. Normally Closed: for vehicles with door switches that rest at power or ground when the door is CLOSED.
14. Immobilizer Type:
1. Normally Open: the starter disable relay will rest OPEN when main power is disconnected.
  2. Normally Closed: the starter disable relay rests CLOSED when main power is disconnected.
15. Sensor Full Trigger:
1. Single: full trigger activation of only one sensor is required to fully trigger the alarm.
  2. Double: full trigger activation of two sensors within a ten second period is required to fully trigger the alarm.
16. NPC (Nuisance Prevention):
1. ON: sensors that trigger excessively will be defeated until they have been stable for more than one hour.
  2. OFF: sensors will not be defeated if triggered excessively.
17. Flex Relay:
1. Dome: the 12-pin Black/White wire will operate as Dome Light Supervision.
  2. Horn: the 12-pin Black/White wire will operate as Horn Honk Output; the 7-pin Brown wire will operate as Dome Light Supervision.
  3. Trunk: the 12-pin Black/White wire will operate as Trunk Release Output; the 12-pin Red/White wire will operate as Dome Light Supervision.
18. VRS (Vehicle Recovery System):
1. OFF: The Vehicle Recovery System is disabled.
  2. ON – Disarm chirps OFF: The Vehicle Recovery System is enabled and, when disarmed by Remote Control, will not chirp the siren.
  3. ON – Disarm chirps ON: The Vehicle Recovery System is enabled and, when disarmed by Remote Control, will chirp the siren 3 times to confirm.
19. Remote Button Unlock (Ign. OFF):
1. ON: a message telling the 2-way remote control to unlock the keypad is sent each time the vehicle ignition is turned OFF.
  2. OFF: no message is sent.
- Note:** This feature works in conjunction with the keypad lock feature of the remote control.

## Menu 2 - Convenience

Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	One-time Bypass	<b>One-time bypass OFF</b>	One-time bypass ON			
2	Override Pulse count	<b>1</b>	2	3	4	5
3	Door Trigger Error Chirp	<b>ON</b>	OFF			
4	Ign-controlled Dome light	<b>ON</b>	OFF			
5	OEM Alarm Disarm w/AUX-Trunk	<b>ON</b>	OFF			
6	OEM Alarm Disarm Output	<b>With Unlock</b>	Before Unlock			
7	OEM Alarm Disarm Pulses	<b>1</b>	2			
8	AUX/Trunk Output type	<b>Validity</b>	OFF	OEM Alarm Arm	2nd unlock	
9	AUX/Trunk Linking	<b>No Linking</b>	Link to Arm	Link to Disarm	Link to Arm/Disarm	
10	AUX 1 Output type	<b>Validity</b>	Latch	Latch/reset/ign	Timed	OFF (5) OEM Alarm Arm (6), 2nd Unlock (7), Remote Start Report* (8)
11	AUX 1 Linking	<b>No Linking</b>	Link to Arm	Link to Disarm	Link to Arm/disarm	
12	AUX 2 Output Type	<b>Validity</b>	Latch	Latch reset/ign	Timed	OFF (5) OEM Alarm Arm (6), 2nd Unlock (7), N/O Door Switch (8), N/C Door Switch (9)
13	AUX 2 Linking	<b>No Linking</b>	Link to Arm	Link to Disarm	Link to Arm/Disarm	
14	AUX 3 Output Type	<b>Validity</b>	Latch	Latch reset/ign	Timed	OFF (5) OEM Alarm Arm (6), 2nd Unlock (7), N/O Door Switch (8), N/C Door Switch (9)
15	AUX 3 Linking	<b>No Linking</b>	Link to Arm	Link to Disarm	Link to Arm/Disarm	
16	AUX 4 Output Type	<b>Validity</b>	Latch	Latch reset/ign	Timed	OFF (5) OEM Alarm Arm (6), 2nd Unlock (7), N/O Door Switch (8), N/C Door Switch (9) Remote Start Report* (10)
17	AUX 4 Linking	<b>No linking</b>	Link to Arm	Link to Disarm	Link to Arm/Disarm	
18	Remote Start Button Control	<b>None**</b>	AUX 1	AUX 4		

\* The "Remote Start" button on the remote will activate AUX 1 or AUX 4 (see Menu Item 18).

\*\*When programming with the Bitwriter, this option is labeled "Normal".

### 1. One-time Bypass:




1. OFF: One-Time Bypass is not available.
2. ON: the One-Time Bypass feature will defeat Passive Arming once and, if Armed by remote control, will defeat Comfort Closure and AUX outputs linked to Arming.

### 2. Override Pulse Count:

- 1-5: sets the number of presses (1-5) on the Control Center Button required to override the alarm system if a remote is damaged or not available.

3. Door Trigger Error Chirp:
  1. ON: if the door trigger is active when arming, the siren will emit a second chirp and a message will be sent to the 2-way remote control as an alert if equipped.
  2. OFF: an active door trigger when arming will not create an alert output.
4. Ign-controlled Dome light:
  1. ON: the dome light supervision output will activate when the ignition is turned OFF.
  2. OFF: the dome light supervision output will not activate when the ignition is turned OFF.
5. OEM Alarm Disarm w/AUX/Trunk (Lt. Green/Black, 7-pin harness):
  1. ON: the OEM Alarm Disarm wire will pulse as programmed when the AUX/Trunk output is activated.
  2. OFF: the OEM Alarm Disarm wire will not pulse when the AUX/Trunk output is activated.
6. OEM Alarm Disarm Output (Lt. Green/Black, 7-pin harness):
  1. With Unlock: the OEM Alarm Disarm wire will pulse as programmed at the same time as the unlock (Blue) wire.
  2. Before Unlock: the OEM Alarm Disarm wire will pulse as programmed before the unlock wire.
7. OEM Alarm Disarm Pulses (Lt. Green/Black, 7-pin harness):
  1. The OEM Alarm Disarm wire will pulse once per operation.
  2. The OEM Alarm Disarm wire will pulse twice per operation.
8. AUX/Trunk Output Type:
  - Refer to AUX 1 Output Type descriptions.
9. AUX/Trunk Linking:
  - Refer to AUX 1 Linking descriptions.
10. AUX 1 Output Type:
  1. Validity: when the AUX command is received the output will turn ON and remain ON until the command ceases.
  2. Latch: when the AUX command is received the output will turn ON and remain ON until the command is received again.
  3. Latch/Reset/Ignition: when the AUX command is received the output will turn ON and remain ON until the command is received again or the ignition is turned ON/OFF.
  4. Timed: when the AUX command is received the output will turn ON for the programmed time duration (default 30sec.).
  5. OFF: the output will not activate for a remote control command, use this option when the AUX command controls an external device such as a garage door module.
  6. OEM Alarm Arm: the output will not activate for a remote control command, it will pulse when the system arms to activate the OEM alarm system.
  7. 2nd Unlock: the output will operate as 2nd Unlock and will only activate when pressing the unlock button on the remote within ten seconds of disarming the system with the remote.
  8. Remote Start Report: the output will pulse once to activate an add-on remote start module and the 12 pin trunk input wire will be monitored for a ground input to confirm remote start activation (2-way remote only) or to shunt connected sensors. The "Remote Start" button on the remote will activate AUX 1 or AUX 4 (see *Menu Item 18*)
11. AUX 1 Linking:
  1. No Linking: the AUX output will not activate for a remote control command.
  2. Link to Arm: the AUX output will activate for the Arm command.
  3. Link to Disarm: the AUX output will activate for the Disarm command.
  4. Link to Arm/Disarm: the AUX output will activate for the Arm & Disarm commands.




12. AUX 2 Output Type:
1. Validity: refer to AUX 1 output type description.
  2. Latch: refer to AUX 1 output type description.
  3. Latch/reset/Ignition: refer to AUX 1 output type description.
  4. Timed: refer to AUX 1 output type description.
  5. OFF: refer to AUX 1 output type description.
  6. OEM alarm arm: refer to AUX 1 output type description.
  7. 2nd unlock: refer to AUX 1 output type description.
  8. N/O door switch: for vehicles with multiple door switches that rest at power or ground when the door is OPEN.
  9. N/C door switch: for vehicles with multiple door switches that rest at power or ground when the door is CLOSED.
13. AUX 2 Linking:
- Refer to AUX 1 Linking description.
14. AUX 3 Output Type:
1. Validity: refer to AUX 1 output type description.
  2. Latch: refer to AUX 1 output type description.
  3. Latch/reset/Ignition: refer to AUX 1 output type description.
  4. Timed: refer to AUX 1 output type description.
  5. OFF: refer to AUX 1 output type description.
  6. OEM alarm arm: refer to AUX 1 output type description.
  7. 2nd unlock: refer to AUX 1 output type description.
  8. N/O door switch: refer to AUX 2 output type description.
  9. N/C door switch: refer to AUX 2 output type description.
15. AUX 3 Linking:
- Refer to AUX 1 Linking description.
16. AUX 4 Output Type:
1. Validity: refer to AUX 1 output type description.
  2. Latch: refer to AUX 1 output type description.
  3. Latch/reset/Ignition: refer to AUX 1 output type description.
  4. Timed: refer to AUX 1 output type description.
  5. OFF: refer to AUX 1 output type description.
  6. OEM alarm arm: refer to AUX 1 output type description.
  7. 2nd unlock: refer to AUX 1 output type description.
  8. N/O door switch: refer to AUX 2 output type description.
  9. N/C door switch: refer to AUX 2 output type description.
  10. Remote start report: refer to AUX 1 output type description.
17. AUX 4 Linking:
- Refer to AUX 1 Linking description.
18. Remote start button control:
1. None: The  button has no function.
  2. AUX 1: The  button will command AUX 1.
  3. AUX 4: The  button will command AUX 4.

## Bitwriter - Only Options



If programming with the Bitwriter or XKLoader 3, the Learn Routine can be locked or unlocked. If the Learn Routine has previously been locked, it must be unlocked with Bitwriter - this cannot be done manually with the Control Center button.

The Bitwriter  or XKLoader 3 gives you access to a wider range of system options. These features and the adjustments that may be programmed are described in the table below.

Item	Feature	Default	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Siren Duration (seconds)	<b>30 sec.</b>	Options: 1 to 180 sec.			
2	Shock Sensor Level	<b>7</b>	Options: 0 to 15 in increments of 1			
3	Zone 4 Sensor Icon Type*	<b>None</b>	Shock Sensor	Field Disturbance	Tilt Sensor	Glass Break/ Ultrasonic/Sensor
4	Zone 7 Sensor Icon Type*	<b>None</b>	Shock Sensor	Field Disturbance	Tilt Sensor	Glass Break Ultrasonic/Sensor
5	AUX/Trunk Remote Icon type*	<b>Trunk</b>	Windows	Sunroof	Audio	Lights/Left dr./ Right dr./ Rear Hatch
6	AUX 1 Timed Output (seconds)	<b>30 sec.</b>	Options: 1 to 90 sec.			
7	AUX 1 Remote Icon type*	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/ Left dr./Right dr./ Rear Hatch/ Timed/ Latched
8	AUX 2 Timed Output (seconds)	<b>30 sec.</b>	Options: 1 to 90 sec.			
9	Remote AUX 2 Icon type*	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/ Left dr./Right dr./ Rear Hatch/ Timed/ Latched
10	AUX 3 Timed Output (seconds)	<b>30 sec.</b>	Options: 1 to 90 sec.			
11	Remote AUX 3 Icon type*	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/ Left dr./Right dr./ Rear Hatch/ Timed/ Latched
12	AUX 4 Timed Output (seconds)	<b>30 sec.</b>	Options: 1 to 90 sec.			
13	Transmitter Programming	<b>Unlocked</b>	Locked			
14	Feature Programming	<b>Unlocked</b>	Locked			

\* Feature only available for the LCD 2-way remote control with display screens.

**Note:** The Bitwriter is a hand held Feature Programming tool that can be used to fine tune and access certain features that are not accessible with manual programming. The Bitwriter plugs into black 3-pin plug on the system. The black 3-pin port will also be utilized by the optional Smartstart module when applicable.

1. Siren Duration: sets the Full Trigger output duration in 1 second intervals up to 180 seconds.
2. Sensor 1 level: directly sets the sensor level of the onboard shock sensor
3. Zone 4 Sensor Icon Type: sets the Zone 4 (Sensor 2) name to be displayed in the Text Field for Warn Away and Full Trigger activations
4. Zone 7 Sensor Icon Type: sets the Zone 7 (Sensor 3) name to be displayed in the Text Field for Warn Away and Full Trigger activations
5. AUX/Trunk Icon Type: sets the name to be displayed in the text field when the AUX/Trunk output is activated/de-activated
6. AUX 1 Timed Output: sets the output duration in 1 second intervals up to 90 seconds for AUX 1
7. AUX 1 Icon Type: sets the Accessory name to be displayed in the text field when the AUX 1 output is activated/de-activated
8. AUX 2 Timed Output: sets the AUX 2 "Timed" output in 1 second intervals up to 90 seconds
9. AUX 2 Icon Type: sets the Accessory name to be displayed in the text field when the AUX 2 output is activated/de-activated
10. AUX 3 Timed Output: sets the AUX 3 "Timed" output in 1 second intervals up to 90 seconds
11. AUX 3 Icon Type: sets the Accessory name to be displayed in the text field when the AUX 3 output is activated/de-activated
12. AUX 4 Timed Output: sets the AUX 4 "Timed" output in 1 second intervals up to 90 seconds
13. Feature Programming: locks and unlocks the user's ability to enter the feature menus and manually change the main unit programming using the Control Center
14. Transmitter Programming: locks and unlocks the user's ability to enter the remote control/Reset menu and manually change any functions using the Control Center

## ***Reset and Deletion***


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If a feature needs to be reset or the remote controls need to be deleted, use the following procedure:

1. **Open** a door.
2. **Turn** the ignition to the ON position.
3. Within 10 seconds, **press** and **release** the Control Center button 2 times if you want to delete remote controls or 3 times to reset features. These function steps are described next.
  - Delete remote controls: This feature erases all remote controls from the memory of the security system. This is useful in cases when a customer's remote is lost or stolen.

**Note:** This does not reset the programmed features of the security system.

  - Reset Features: This resets all features of the security system to the factory default settings.

**Note:** This feature does not delete the remote controls from the security system.
4. Once you have selected the function step, **press** the Control Center button once more and **hold** it. The LED flashes and the siren chirps to confirm the selected functional step. **Do not release** the Control Center button
5. While holding the Control Center button, **press** the  button on a programmed remote control. The siren chirps to confirm that the remote controls have successfully been deleted or the features have been reset.
6. Once the feature is reset, the Control Center button can be released.

## Long Term Event History

The system stores the last six full triggers in memory. These are not erasable. To access long term event history:

1. With the ignition OFF, **press** and **hold** the Control Center button.
2. **Turn** the ignition ON.
3. **Release** the Control Center button.
4. Within 5 seconds, **press** and **release** the Control Center button. The status LED flashes in groups indicating the last six zones that triggered the unit for 1 minute or until the ignition is turned OFF (indicated in the order of most recent first to oldest last). Refer to Table of Zones for trigger information.

**Note:** The Warn Away triggers are not stored to memory and is not reported.

## Table of Zones

A zone is represented by the number of status LED flashes used by the system to identify a particular type of input.

Zone	Description	Input Description
1	Trunk Pin	12-pin Blue wire
2	Instant trigger: a heavier impact detected by the onboard shock sensor	Onboard shock sensor.
3	Door switch trigger	12-pin Green or Violet wire
4	Instant trigger: For optional sensors	3-pin optional GWA MUX port
5	Ignition trigger	7-pin Yellow wire
6	Hood Pin	7-pin Gray wire
7	Instant trigger: For optional sensors	4-pin optional MUX port

## Troubleshooting: Alarm

Shock sensor doesn't trigger the alarm:

1. Was the onboard shock sensor adjusted before the brain was mounted? If so re-adjust the sensor.
2. Has the onboard shock sensor been turned OFF? The sensor has the ability to be turned OFF when adjusting.
3. Has the NPC system been triggered? If so, you hear 5 chirps when disarming. To check this, turn the ignition key ON and OFF to clear the NPC memory, and then retest the shock sensor. For a detailed description of NPC, see *Nuisance Prevention Circuitry* section of the owners guide.

Door input does not immediately trigger full alarm. Instead, chirps are heard for the first 3 seconds:

- That's how the progressive two-stage door input works! This is a feature of this system even if the door is instantly closed again, the progression from chirps to constant siren continues.

Closing the door triggers the system, but opening the door does not:

- Have you correctly identified the type of door switch system? This happens often when the wrong door input has been used.

System does not passively arm until it is remotely armed and then disarmed:

1. Is passive arming programmed ON?
2. Are the door inputs connected? Is the 12-pin Blue wire connected to the door trigger wire in the vehicle? Either the 12-pin Green wire or Violet wire should be used instead.

Door input does not respond with the progressive trigger, but with immediate full alarm:

- Does the Status LED indicate that the trigger was caused by the shock sensor? (see *Table of Zones* section of this guide.) The shock sensor, if set to extreme sensitivity, may be detecting the door unlatching before the door switch sends its signal. Reducing the sensitivity can solve this problem.

## Appendix - Door Lock System Types

### Identifying the Door Lock System:

There are eight major types of door lock circuits not including door lock systems that are centrally controlled through the vehicles data bus system.

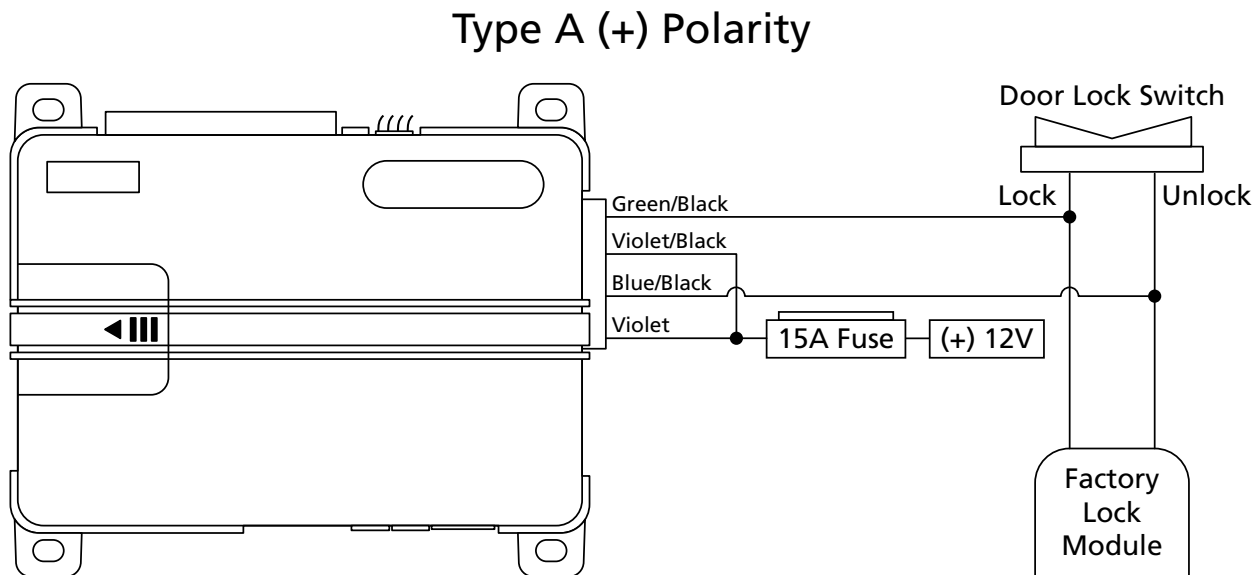
**Note:** In most data bus systems door locks can be controlled with a Directed interface module.

- Type A: Three wire (+) 12V pulse controlling factory relays/module.
- Type B: Three wire (-) ground pulse controlling factory relays/module.
- Type C: Directly wired to the switch (5-wire reversing polarity switches) with no external relays/modules.
- Type D: Aftermarket actuator driven systems. These include central locking systems that don't have an actuator in the drivers' door but has actuators in the remaining doors of the vehicle.
- Type E: One wire electronically activated vacuum system (typically found in older Mercedes Benz vehicles). This typically requires the door lock pulse output duration to be changed on the system.
- Type F: One wire door lock system that requires the wire to become an open circuit (break the wire) to lock the vehicle doors and requires a (-) pulse to unlock the vehicle doors.
- Type G: (+) one wire multiplex door locks. The vehicle requires a (+) 12V pulse through resistors to control the locks in the vehicle.
- Type H: (-) one wire multiplex door locks. The vehicle requires a (-) ground pulse through resistors to control the locks in the vehicle.

The following diagrams will show how to connect this system to the different types of door lock types.

Type A: (+) 12v controlling factory relays/modules:

With this type of circuit the door lock wires will test (+) 12v respectively when pressing Lock or Unlock from the switch.

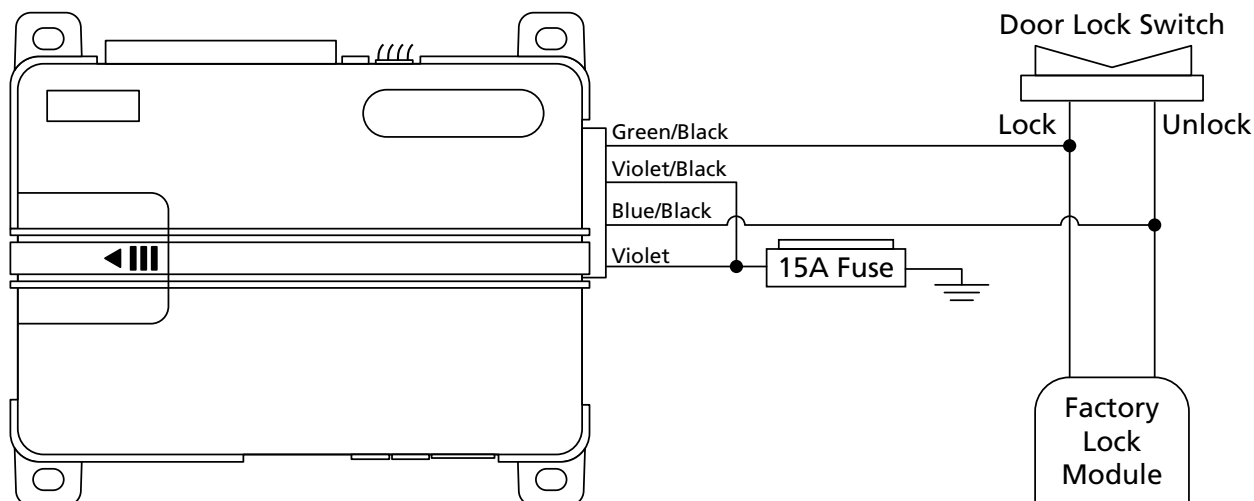


Type B: (-) ground controlling factory relays/modules

With this type of circuit the door lock wires will test (-) ground respectively when pressing Lock or Unlock from the switch or for factory alarm arm/lock and disarm/unlock, you will test the wires while turning the key in the driver door key cylinder.

**Note:** For factory alarm disarm/unlock the system may need to be programmed to have a double pulse output when unlocking (see *Door Lock Pulses* in Feature Programming).

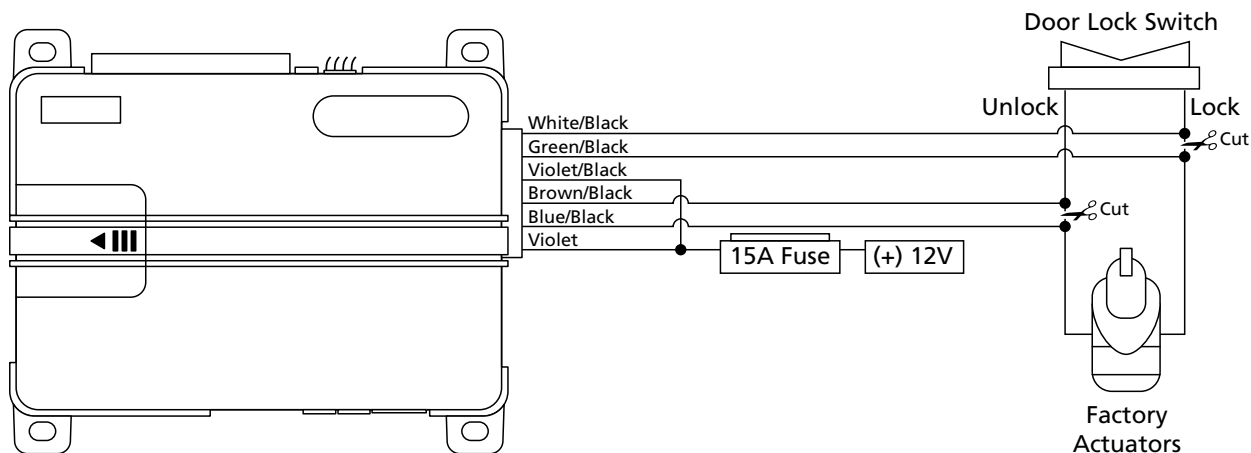
## Type B (-) Polarity



Type C: Direct wired reversing polarity

With this type of circuit, there are typically 4 or 5 heavy gauges wires that go to the switch. One wire feeds (+) 12v to the switch, the other feeds a (-) ground to the switch while the remaining wires will go directly out to the actuators. The actuator wires will rest at ground, therefore you must ensure that the White/Black and Brown/Black wires are connected to the switch side of the cut wire, if this is not done you will send (+) 12v to ground possibly damaging the module or the switch.

## Type C Doorlocks Reverse Polarity or 5-wire

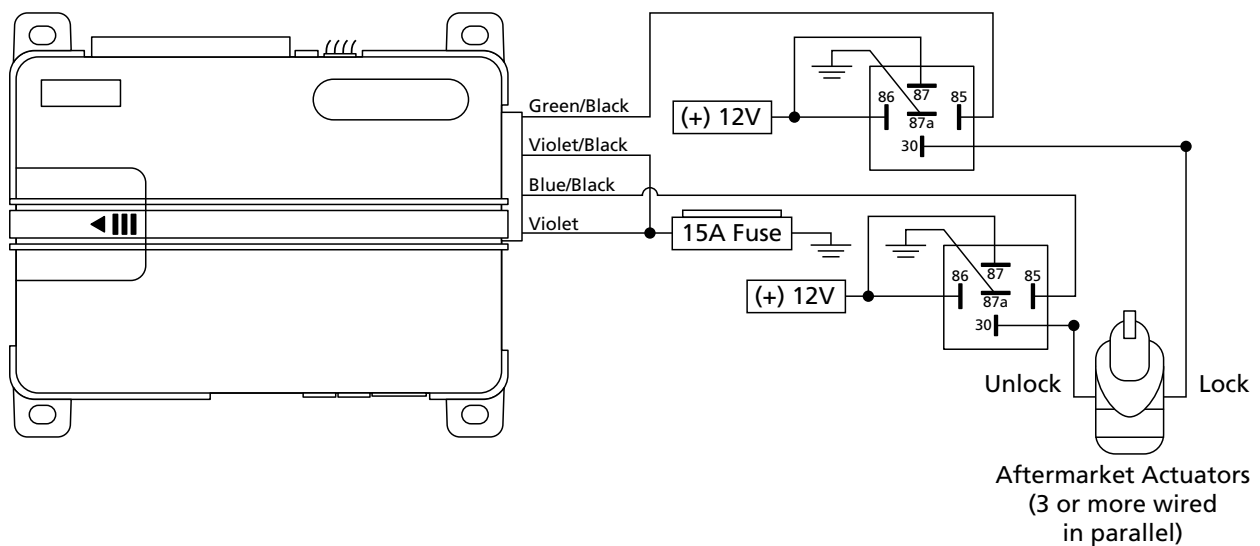
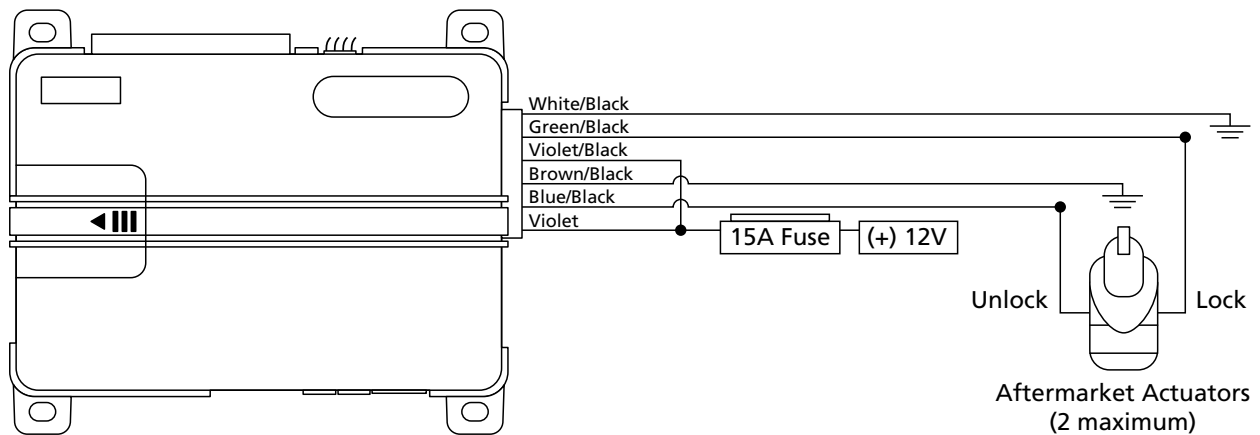


### Type D: Aftermarket actuator driven systems

With this setup you are either adding actuators to a vehicle without a keyless entry or power door lock option or you may have a Type D Vehicle with a central locking system (all doors are controlled when manually locking the driver front door) this will only require the installation of one actuator in the driver door.

**Note:** If installing more than two actuators it is recommended to use external relays to support the current demands of three or more actuators.

## Type D Doorlocks Adding Aftermarket Actuators

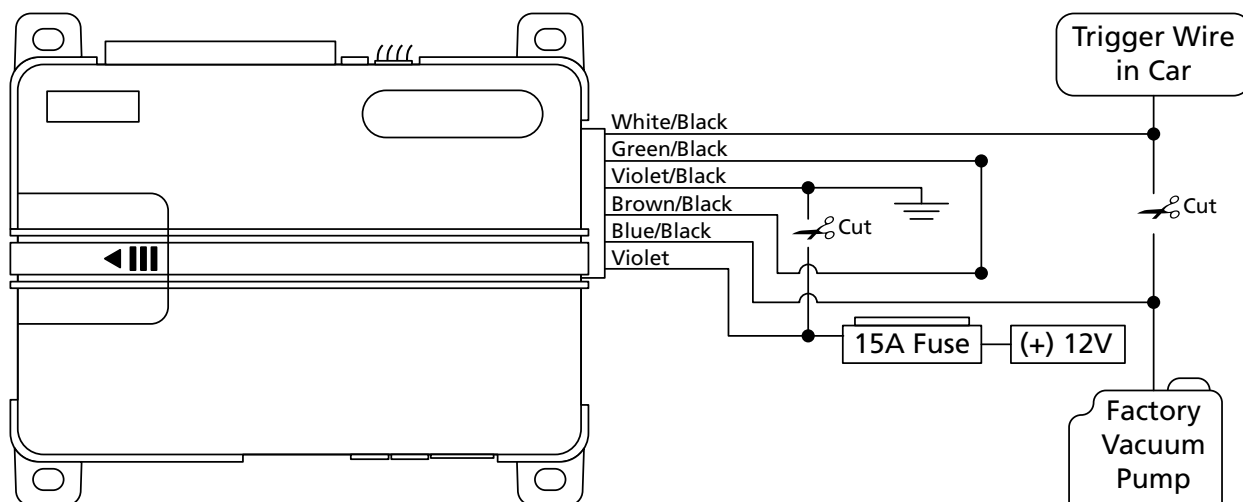


Type E: One wire wlectronically activated vacuum system

In most cases the door lock output duration will need to be extended to a 3.5 second pulse (see *Door Lock Output Duration* in Feature Programming). This wire will test (-) ground when the doors are locked and (+) 12v when the doors are unlocked.

**Note:** The Violet jumper wire at the fuse holder between the Pin 1-Violet wire and the Pin 4-Violet/Black wire of the door lock harness must be cut!

## Type E Vacuum Activated

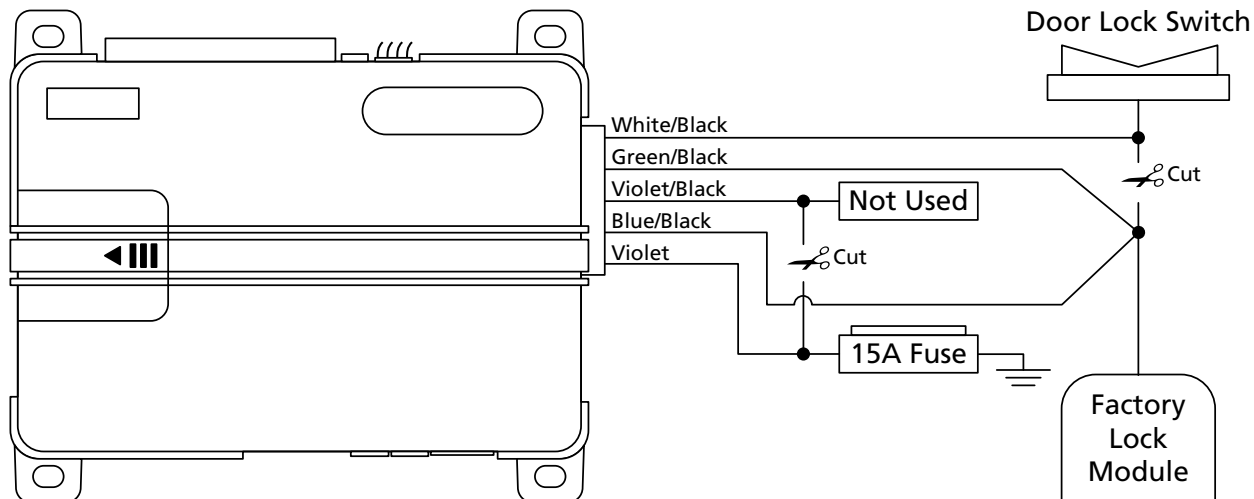


Type F: One wire door lock system

This type of system requires an open circuit to lock the doors and a (-) pulse to unlock the doors. The wire will test as an open circuit when locking the vehicle doors and will test as a (-) ground when unlocking the vehicle doors (these can be reversed in some vehicles).

**Note:** The Violet jumper wire at the fuse holder between the Pin 1-Violet wire and the Pin-4 Violet/Black wire of the door lock harness must be cut!

## Type F One Wire





### Type G: (+) 12v one wire multiplexed systems

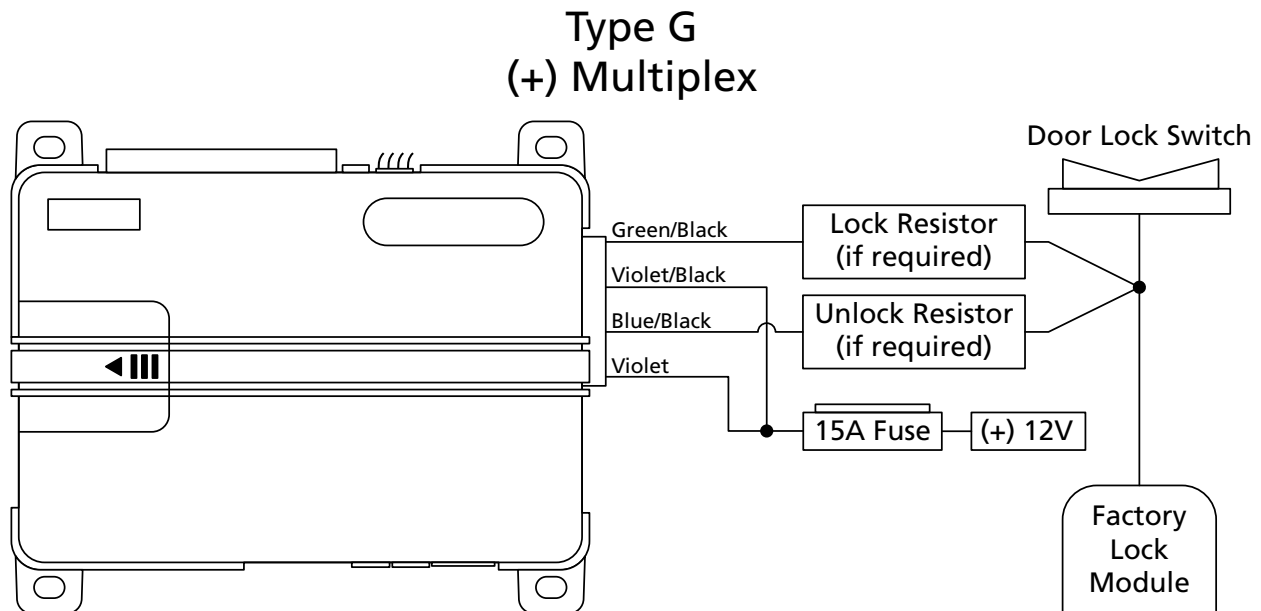
This type of system handles the door lock control on one wire utilizing different (+) 12v voltages to handle the lock and unlock function or factory alarm arm/lock and factory disarm/unlock function in the vehicle. The door lock switch, driver door key cylinder or BCM may contain one or two resistors to achieve the required voltage to control the vehicle door lock system.

#### Single resistor type:

If one resistor is used in the door lock switch/key cylinder, the wire will show (+) 12v in one direction and less than (+) 12v when operated in the opposite direction.

#### Dual resistor type:

If two resistors are used in the door lock switch/key cylinder, the wire will show less than (+) 12v in either direction.



#### Type H: (-) Ground one wire multiplexed systems

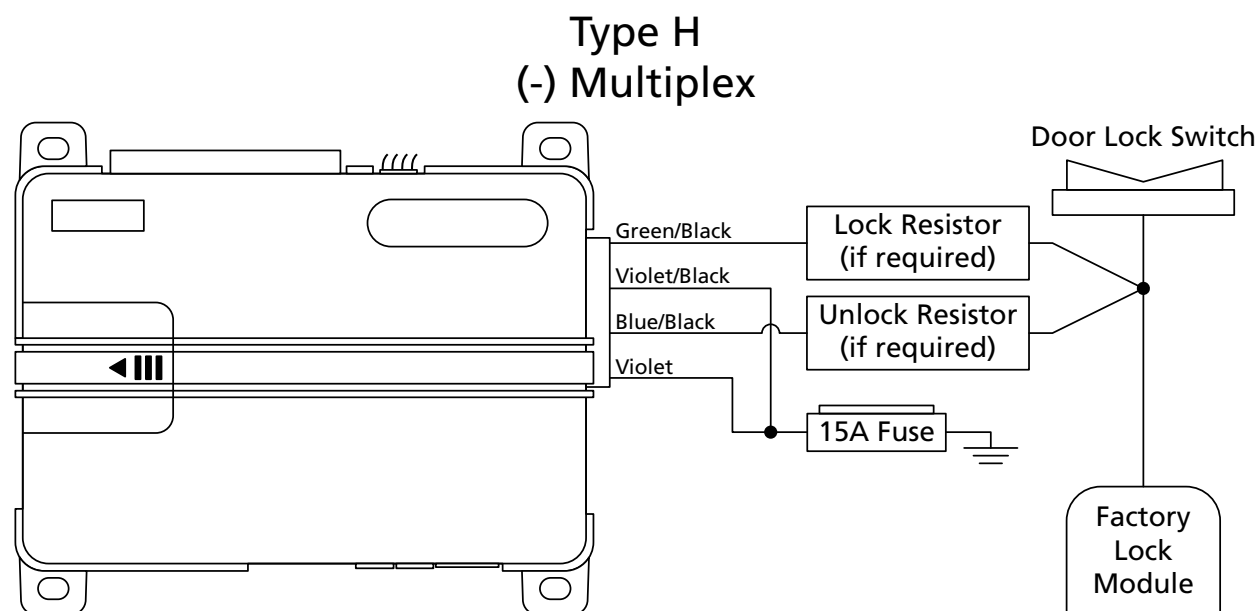
This type of system handles the door lock control on one wire utilizing different (-) ground voltages to handle the lock and unlock function or factory alarm arm/lock and factory disarm/unlock function in the vehicle. The door lock switch, driver door key cylinder or BCM may contain one or two resistors to achieve the required voltage to control the vehicle door lock system.

#### Single resistor type:

If one resistor is used in the door lock switch/key cylinder, the wire will show (-) ground in one direction and resistance to ground when operated in the opposite direction.

#### Dual resistor type:

If two resistors are used in the door lock switch/key cylinder, the wire will show resistance to ground when operated in either direction.



#### Determining the Proper Resistance Values:

Most vehicle information documents will offer the resistance values required to operate the factory door locks in the vehicle, however there are times when the information is not available or a different resistance value is required. To determine the resistance values that are required to control the lock/arm and unlock/disarm functions in the vehicle you will need to use a digital multimeter. Set for measuring resistance (ohms)

1. Locate the lock/arm or unlock/disarm wire in the vehicle.
2. Once the correct wire is located, cut it in half and set your digital multimeter to ohms.
3. Place one lead of the meter to (+) 12v or a reliable (-) ground (depending on (+) or (-) multiplex door lock system) and the other lead of the meter to the switch side of the cut wire in the vehicle. Press and hold the switch or turn the key in the door to the lock position. Your meter will display the proper resistance for that function. Repeat the process, however you will be pressing the unlock side of the switch or turning the key in the door to the unlock position and your meter will display the proper resistance for that function.
4. Once the proper resistance(s) have been found use the applicable Type G or Type H diagrams for wiring information.

**Note:** Not all multiplex door lock circuits for both lock/arm and unlock/disarm will need resistors for both operations. If your meter shows 0 resistance in either direction, then a resistor is not required for that operation.