

CODE ALARM

PROFESSIONAL SERIES

Security and Keyless Entry Installation Guide

ca1045

****This guide is a reference for module firmware version 5.0 or higher****

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BEFORE YOU BEGIN

PROFESSIONAL INSTALLATION STRONGLY RECOMMENDED

Installation Precautions:



Roll down window to avoid locking keys in vehicle during installation



Avoid mounting components or routing wires near hot surfaces



Avoid mounting components or routing wires near moving parts



Tape or loom wires under hood for protection and appearance



Use grommets when routing wires through metal surfaces



Use a Digital Multi Meter for testing and verifying circuits. **DO NOT USE A TEST LIGHT, OR "COMPUTER SAFE PROBE"** as these can set off air bags or damage vehicle computers.



Technical Support (800) 421-3209
or go to
www.voxxuniversity.com

5 Pin Main Harness

5 PIN MAIN	1	WHITE/RED	PARKING LIGHT INPUT
	2	WHITE	PARKING LIGHT OUTPUT
	3	BLACK	GROUND
	4	BROWN	SIREN / HORN OUTPUT
	5	RED	BATTERY 12V (+)

6 Pin Input / Output Harness

6 PIN INPUT / OUTPUT	1	PURPLE	DOOR TRIGGER INPUT (+)
	2	BLUE	TRUNK PIN INPUT (-)
	3	GREEN	DOOR TRIGGER INPUT (-)
	4	YELLOW	IGNITION INPUT (+)
	5	ORANGE	GROUND WHEN ARMED OUTPUT (-)
	6	RED/WHITE	TRUNK RELEASE OUTPUT (-)

2 Pin Door Lock Output Harness

2 PIN LOCK	1	BLUE	UNLOCK (-)
	2	GREEN	LOCK (-)

5 Pin Main Harness

1	WHITE/RED	PARKING LIGHT INPUT
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2	WHITE	PARKING LIGHT OUTPUT
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Locate the parking light output wire at the vehicle's light switch.

Verification: This wire registers positive voltage when the parking lights are turned on.

Positive switching Parking Lights:

Connect the WHITE/RED wire to a 15 Amp max fused battery source.

Connect the WHITE wire to the parking light output wire.

Negative switching Parking Lights:

Connect the WHITE/RED wire to a good chassis ground.

Connect the WHITE wire to the parking light output wire.

3	BLACK	GROUND
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Connect the BLACK wire to a solid chassis ground point using a ring terminal and self tapping screw (not supplied). Scrape away paint from the grounding point to ensure a good connection. The recommended grounding point is a metal surface in the driver's side kick panel area.

NOTE: Do not ground the BLACK wire with any other vehicle components.

4	BROWN	SIREN / HORN OUTPUT
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This output is available to be used as a constant (+) siren output OR a pulsed (-) horn output and is selectable by changing the jumper position on the main module. Refer to the system layout on page 22 for location.

SIREN:

Connect the BLACK siren wire to a chassis ground using a ring terminal and self tapping screw (not supplied).

Route the BROWN siren output wire from the control module through the firewall and connect to the RED wire on the siren.

NOTE: Be sure to loom the siren wires, and seal the grommet.

HORN:

Locate the vehicle's horn wire.

Verification: This wire will register at positive voltage and register ground when the horn switch is pressed.

Connect the BROWN wire to the vehicle's horn wire. This is a low current output, 300mA.

5	RED	BATTERY 12V (+)
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Locate 1 of the vehicle's constant 12 Volt battery wires at the ignition switch.

Verification: This wire will register (+) voltage in all positions of the ignition switch.

Connect the RED wire to the constant 12 Volt battery wire.

NOTE: Remove all fuses until all connections are made.

6 Pin Input / Output Harness

1	PURPLE	DOOR TRIGGER INPUT (+)
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Locate the vehicle's dome light or door pin switch wire.

Verification: This wire will register positive voltage (POS) when the door is opened and the interior light is on. This wire will register ground or "0" Volts when the door is closed and the interior light is off.

Connect the PURPLE wire to the vehicle's positive door input wire(s).

NOTE: Certain vehicles may require multiple connections. Refer to vehicle application guide

2	BLUE	TRUNK PIN INPUT (-)
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Locate the vehicle's trunk pin switch wire and connect to the BLUE wire.

Verification: This wire when connected will register ground when the vehicle's trunk is opened.

Connect the BLUE wire to the trunk pin.

3 GREEN

DOOR TRIGGER INPUT (-)

Locate the vehicle's dome light or door pin switch wire.

Verification: This wire will register ground (NEG) when the door is opened and the interior light is on. This wire will register positive voltage when the door is closed and the interior light is off.

Connect the GREEN wire to the vehicle's negative door input wire(s).

NOTE: Certain vehicles may require multiple connections. Refer to vehicle application guide

4 YELLOW

IGNITION INPUT (+)

Locate the vehicle's ignition wire at the ignition switch.

Verification: This wire registers voltage when the key is turned to the ON (or RUN) position. The voltage does not drop out when the key is turned to the START (or CRANK) position.

Connect the YELLOW wire to the vehicle's Ignition wire.

5 ORANGE

GROUND WHEN ARMED OUTPUT (-)

This wire will have a continuous (-) 500mA output when the system is Armed. This wire is typically used for controlling window modules or additional sensors.

6 RED/WHITE

TRUNK RELEASE OUTPUT (-)

Locate the vehicle's trunk release wire at the trunk release switch.

Verification: This wire will register either positive voltage or ground when the trunk release is activated.

This is a low current output, 200mA.

2 Pin Lock Output Harness

1	BLUE	UNLOCK (-)
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2	GREEN	LOCK (-)
---	-------	----------

The door lock / unlock outputs are designed to control several different types of systems which may require additional parts. Please review the wire and location chart to see which type of door lock system is in your vehicle. The most common types are shown in the following diagrams.

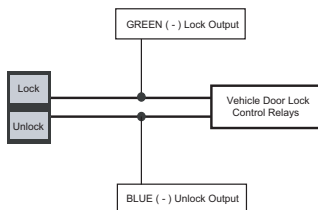
Negative Switching Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will register ground when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE wires shown in the diagram below.

Negative Locks:



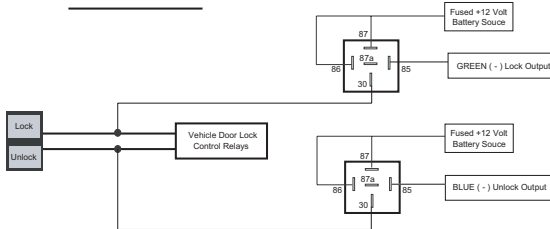
Positive Switching Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will register positive voltage when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE wires shown in the diagram below.

Positive Locks:



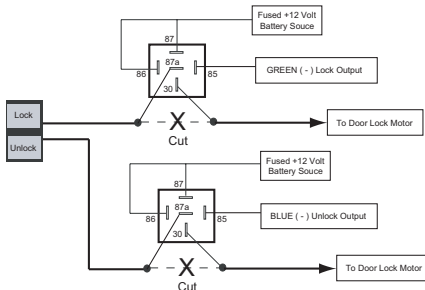
Reverse Polarity Locks (5-Wire Door locks)

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will rest at ground and register positive voltage when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Reverse Polarity Locks:



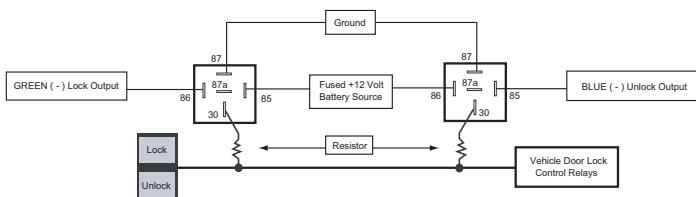
Negative Multiplexed Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: This wire will show variable ground when the switch is activated. Please consult the wire and location chart for specific resistor values for your vehicle.

Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Multiplex Locks:



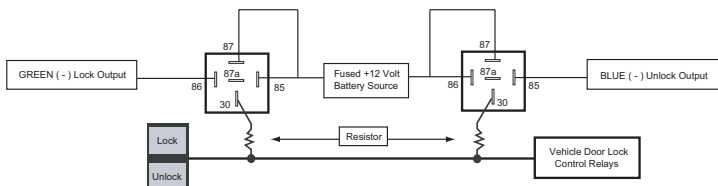
Positive Multiplexed Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: This wire will show variable positive voltage when the switch is activated. Please consult the wire and location chart for specific resistor values for your vehicle.

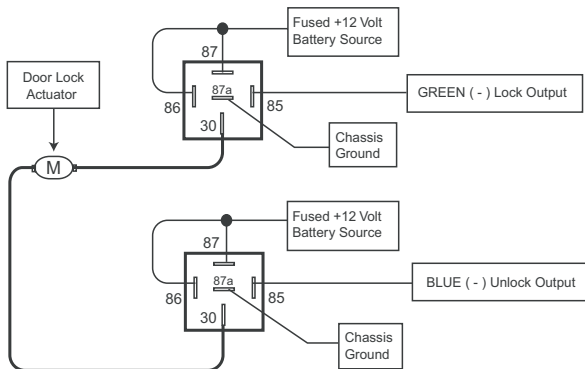
Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Multiplex Locks:



Adding Aftermarket Actuators

After installing aftermarket actuators, (not supplied). Connect the GREEN and BLUE wires shown in the diagram below using (2) SPDT relays (not supplied).



Additional Ports

LED Port

The LED included in the kit will serve as a visual indicator of the alarm's status. It should be installed in the dash, located where it can be easily seen from outside the vehicle, yet not be distracting to the driver. Once a location has been selected, check behind the panel for wire routing access, and to confirm the drill will not damage any existing components as it passes through the panel. Drill a 1/4" hole, and pass the red and blue wires from the LED through the hole, from the front of the panel. Firmly press the body of LED into the hole until fully seated.

Programming / Valet Button Port

Select a mounting location that is within reach of the ignition switch, as this switch in combination with the ignition switch, will be used to program the certain features of the system. It is suggested that the switch be mounted to the lower dash panel in the driver's area within reach of the driver.

On-Board Shock Sensor

Select a solid mounting surface for the alarm module inside the passenger compartment (behind the dash), and mount the sensor using cable ties. Refer to feature programming for on-board shock sensor adjustment.

DBI Port - 4 Pin Data Bus Interface

The DBI port is used for external Flashlogic data immobilizer & door lock Interface modules to communicate with the vehicle's databus. When using the DBI port to control Flashlogic modules please refer to the D2D (Data to Data) function list available per vehicle firmware on the tech service web site.

Set Up & Programming

Transmitter Programming - Feature Bank 1



1. Turn the ignition ON.
2. Press and hold the valet/override button.
3. Within 10 seconds the system will chirp (3) three times.
4. Press 1 button of each transmitter you wish to program.
5. The system will respond with 1 chirp for each accepted transmitter.
6. Pressing the override button at anytime during programming will advance to the next bank.


NOTE: The system will exit transmitter programming after 15 seconds of inactivity.

NOTE: This system has 1 button programming which programs all channels of the system.

NOTE: The system will hold up to 4 transmitters in memory, programming a 5th transmitter will erase the oldest transmitter in memory.

Manual Feature Programming - Feature Bank 2 - 4

1. Turn the ignition ON.
2. Press and hold the valet/override button.
3. Within 10 seconds the system will chirp (3) three times.
4. Use the valet/override button to advance through each option bank. For feature programming advance to Feature Bank 2, 3, or 4 which is (4) four, (5) five or (6) six chirps.
5. Use the transmitter  button to scroll through the selections in each feature bank, the system will chirp to match the feature number.
6. Press the transmitter  button to change the desired feature. The LED will flash indicating the changed feature.

Defaulting All Features: Pressing the  button anytime while in any of the feature banks (except during shock sensor programming) will default all features and return you to feature bank 2 - 4 chirps.

NOTE: The system will remain in feature programming mode as long as the ignition is on, there is no time limit. To exit programming turn the IGNITION OFF.

**Feature Bank 1 - 3 Chirps
Transmitter Programming**

Refer to transmitter programming.










	Feature Bank 2 - 4 Chirps Security Control	1 LED Flash	2 LED Flash	3 LED Flash	4 LED Flash	5 LED Flash	6 LED Flash
1	Silent Choice	ON	OFF				
2	Door Locks	Active	Passive				
3	System Arming	Active	Passive				
4	System Notifications	N/A					
5	Alarm Duration	N/A					
6	Security	ON	OFF	ON w/ OEM Remote Start			
7	Anti-Hijack Mode	OFF	ON				
8	Ground While Armed Orange (-) Output	N/A					
9	DBI Port Protocol	DBI	ADS				
10	Arm / Disarm Chirps	Standard: 2 - Arm 1 - Disarm	Inverted: 1 - Arm 2 - Disarm				
11	LED Indicator	ON	OFF				
12	Auto Re-lock	OFF	Lock Only	Arm & Lock			
13	Extended Parking Lights	OFF	After Unlock	After Lock	After Lock & Unlock		
14	Parking Light Relay / Trunk (-) Output	N/A					
15	Digital Tilt Sensor	N/A					
16	Domelight Delay: Preset Time or Programmable	OFF / Program Custom Time	15 Seconds	30 Seconds	45 Seconds	60 Seconds	120 Seconds

Programming Update Notice: Firmware version 5.0 or later.

	Feature Bank 3 - 5 Chirps Output Control	1 LED Flash	2 LED Flash	3 LED Flash	4 LED Flash	5 LED Flash	6 LED Flash
1	Lock / Unlock Timing	1 Sec.	3.5 Sec.	1 Sec. Lock, 2x Unlock	30 Sec. Lock, 2x Unlock	2x Lock, 1 Sec. Unlock	0.5 Sec.
2	Factory Disarm	N/A					
3	Ignition Locks	OFF	Lock / Unlock	Lock Only	Unlock Only		
4	Trunk Output Timing	N/A					
5	Horn Output Timing	N/A					
6	RPS - Real Panic Sound	ON	OFF				

	Feature Bank 4 - 6 Chirps Shock Sensor Adjustment	Increase Sensitivity	Decrease Sensitivity
1	Full Trigger	Press & Release Lock	Press & Release Unlock
Press Lock + Unlock for 2 seconds to lock in the change and move to next setting.			
2	Lite Touch	Press & Release Lock	Press & Release Unlock
Press and release Lock + Unlock to lock in the change and exit programming.			

Feature Bank 4 - Shock Sensor Adjustment

1. Enter Feature Bank 4
2. Press and release  to select full trigger.
3. Use  or  to adjust the settings. The system will give short chirps upon each press.
4. Press  +  for 2 seconds to lock in the change and advance to the lite touch setting, the system will give 2 long chirps to confirm.
5. Use  or  to adjust the settings.
6. Press and release  +  to lock in the change, the system will exit programming and give 1 long chirp to confirm. **This step must be completed to properly program the shock sensor.**

PC Based Feature Programming / Firmware Updates (optional)

When using the NEW Code Alarm Utility App along with a VEPROG Programming tool you may program selectable features or update the firmware of this module.

To Use a PC and VEPROG tool for Feature Programming or Firmware Updates:

1. Download and install the Code Alarm Utility App. from the VoxxTech / Software Downloads section of voxxuniversity.com (login required)
2. Launch the Code Alarm Utility App.
3. Connect the VEPROG to your PC via the USB port.
4. Connect the VEPROG to the Code Alarm Module.
5. Select the features you wish to change or update firmware if needed.

Dome Light Delay / Theater Dimming

When the Dome Light Delay is set to **“Program Custom Time”** in feature programming (this is the default setting) the system can be programmed to delay arming after the lock button is pressed for vehicles with a dome light delay or theater dimming feature. Once programmed the system will ‘learn’ the timing of the dome light delay (60 second max) and add 2 seconds before arming.

1. Close all doors with ignition off.
2. Using the transmitter press LOCK, UNLOCK, LOCK ,UNLOCK, LOCK , UNLOCK, LOCK. The LED will light solid to indicate the system has entered DOME DELAY LEARN MODE.
3. Immediately OPEN then CLOSE the door WITHOUT disarming the system. The system will then monitor the door trigger wire. Once the dome light turns off, the system will then add 2 seconds and then exit the learning mode.
4. The LED will begin to flash indicating the system has exited the learning mode and is now armed.

Note: To program a custom delay time Feature Bank 2, Feature 16, “Dome Light Delay: Preset Time or Programmable, must be set to “OFF/Program Custom Time”.

Defaulting the Dome Light Delay: Turn the ignition ON then OFF 3 times then press and hold the valet button for 5 seconds, the system will chirp 1 time indicating the learned delay time has been cleared.

Chirp Delete - User Accessible

System ARM/DISARM chirps can be toggled ON or OFF without entering the programming feature banks.

1. Turn the ignition ON then OFF.
2. Press and release the valet/programming button 3 times. The system will respond with 1 chirp for ON or 2 chirps for OFF.

User Selectable LED

This feature will control whether the LED is ON or OFF when the system is Armed/Locked. This will be selectable in feature programming OR on-the-fly without entering the programming feature banks.

1. Turn the ignition ON, OFF, ON, OFF.
2. Press and release the valet/programming button 3 times. The system will respond with 1 chirp for ON or 2 chirps for OFF.

Feature Descriptions

Feature Bank 2 - Security

- 1 - Silent Choice:** Controls the normal arm/disarm chirps of the security system.
- ON** - Silent arming/disarming upon first press of lock/unlock, pressing lock/unlock a second time will activate the arm/disarm chirps respectively. The system will only sound the arm/disarm chirps upon a second press of the lock/unlock buttons.
- OFF** - normal arm/disarm chirps upon the first press of lock/unlock.
- 2 - Door Locks:** Determines manual or automatic locking of the vehicle's doors.
- Active** - Requires use of the transmitter to lock the vehicle's doors.
- Passive** - Automatically locks the vehicle's doors 1 minute after the last door is closed
- 3 - Passive Arming:** Determines manual or automatic locking of the vehicle's doors.
- Active** - Requires use of the transmitter to lock the vehicle's doors.
- Passive** - Automatically locks the vehicle's doors 1 minute after the last door is closed.
- Note:** For Passive Locks, feature #3, System Arming, must also be set to passive.
- 4 - Not available on this model.**
- 5 - Not available on this model.**
- 6 - Security:** Controls security functionality - ON / OFF.
- ON** - Full security functionality.
- OFF** - The security system does not trigger. Panic, Remote Start and all other convenience features operate as normal.
- ON w/OEM Remote Start Compatibility** - This will prevent a vehicle's factory remote start from triggering the security system when activated. The system will use the ignition input to shunt shock and door inputs until 5 seconds after they clear. If the alarm is triggered prior to ignition on, then ignition will not shunt/cancel the alarm's triggered state. Also, note that the ignition input will no longer serve as a trigger if this option is selected on.

7 - Anti-Hijack Mode: Controls the Car Jack mode - ON / OFF.

OFF - Standard security system operation.

ON - Enables Car Jack mode functionality as described in the owners manual

8 - Not available on this model.

9 - DBI Port Protocol: Determines the protocol type in which the DBI port uses to interface with external modules.

DBI Protocol

ADS Protocol

10 - Arm/Disarm Chirps: Determines the number of chirps and parking light flashes when the system is armed/disarmed.

Standard - 2 chirps/light flashes with arm, 1 chirp/light flash with disarm.

Inverted - 1 chirp/light flash with arm, 2 chirps/light flashes with disarm.

11 - LED Indicator: Control of the LED when the system is armed / locked.

ON - LED will flash when system is armed / locked

OFF – LED will not flash when system is armed / locked. Only applies to normal operation (armed/locked) and does not affect programming, valet mode, diagnostics, passive lock countdown or PTN

12 - Auto Re-Lock: When Auto Re-lock is selected, the system will re-lock the vehicle after 3 minutes if the system was disarmed and a door was NOT opened within that set amount of time. A door opening within this time cancels Auto Re-Lock.

Note: This feature is separate from Passive/Active Arming

OFF – Standard operation.

Lock Only – The unit will re-lock the vehicle after 3 minutes if the system was disarmed and a door was NOT opened within that time.

Arm & Lock - The system will arm and also re-lock the vehicle after 3 minutes if the system was disarmed and a door was NOT opened within that time.

13 - Extended Parking Lights: When selected, this feature will keep the parking lights on for an additional 30 seconds after the standard flashes when pressing lock or unlock.

OFF – Normal parking light function.

After Unlock – Parking lights will stay on for 30 seconds after normal unlock flashes.

After Lock - Parking lights will stay on for 30 seconds after normal lock flashes.

After Lock & Unlock - Parking lights will stay on for 30 seconds after normal lock and unlock flashes.

14 - Not available on this model.

15 - Not available on this model.

16 - Dome Light Delay, Preset Time or Programmable: The system can be programmed to delay arming after the lock button is pressed based on preset delay times or a customizable delay time.

OFF/Program Custom Time - There will be NO delay unless a custom delay time has been learned. If a time has been learned, the system will add 2 seconds to the end of the programmed time before arming.

15 Seconds - The system will wait 15 seconds before arming.

30 Seconds - The system will wait 30 seconds before arming.

45 Seconds - The system will wait 45 seconds before arming.

60 Seconds - The system will wait 60 seconds before arming.

120 Seconds - The system will wait 120 seconds before arming.

Feature Bank 3 - Output Control

1 - Lock / Unlock Timing: Controls the timing of the BLUE and GREEN lock output wires.

1 Sec. - Single 1 second lock pulse, single 1 second unlock pulse.

3.5 Sec. - Single 3.5 second lock pulse, single 3.5 second unlock pulse.

1 Sec. Lock, 2x Unlock - Single 1 second lock pulse, double 1 second unlock pulse.

30 Sec. Lock, 2x Unlock - Single 30 second lock pulse, double 1 second unlock pulse.

2x Lock, 1 Sec. Unlock - Double 1 second lock pulse, single 1 second unlock pulse.

0.5 Sec. Pulse - Single 0.5 second lock pulse, single 0.5 second unlock pulse.

2 - Not available on this model.

3 - Ignition Locks: Control of door locks when the ignition is cycled ON or OFF.

OFF - Door locks not activated by ignition.

Lock / Unlock - Doors lock when ignition is turned on and unlock when ignition is turned off.

Lock Only - Doors lock when ignition is turned on.

Unlock Only - Doors unlock when ignition is turned off.

4 - Not available on this model.

5 - Not available on this model.

6 - RPS - Real Panic Sound: Controls the panic out when triggered from the transmitter.

Note that this option only applies when the HORN/SIREN jumper is placed in the HORN position.

ON - Randomized horn honks when the alarm or panic is triggered.

OFF - Standard pattern horn honks when panic is triggered.

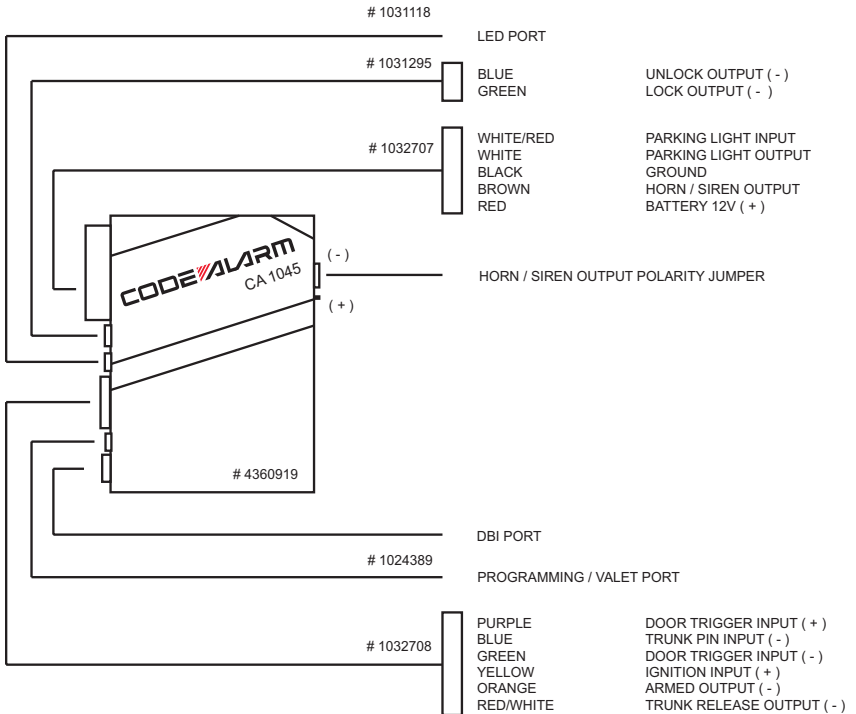
Transmitter Button Functions

	Lock	Unlock	Trunk	Car Find / Panic	Operation Method
Lock	X				Press and Release
Unlock		X			Press and Release
Trunk			X		Push and Hold (3 Sec)
Car Finder				X	Press and Release
Panic				X	Push and Hold (3 Sec)
Shock Bypass	X			X	Press and Release Lock then Press Lock + Car Find (within 5 Sec)
Passive Arming Bypass			X		Press 2 Times (within 5 Sec)
Arm with Hidden Alarm Function	X		X		Press Trunk then Lock (within 5 Sec)

Security Trigger Zones

If the security system has been triggered the LED will flash one of the patterns below indicating the zone.

LED FLASHES	TRIGGER ZONE
2 Flashes	Hood / Trunk Input
3 Flashes	Door Input
4 Flashes	Shock Sensor
5 Flashes	Ignition Input



STARTER INTERRUPT RELAY
#1031123



ORANGE
YELLOW
WHITE
RED
OPEN

86 - ARMED OUTPUT (-)
85 - IGNITION (+)
87A - STARTER OUTPUT - MOTOR SIDE
30 - STARTER INPUT - KEY SIDE
87 - OPEN

Voxx Electronics Corporation.
Customer Service 1-800-421-3209
WWW.CODE-ALARM.COM

FCC COMPLIANCE

This device complies with Part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including any interference that may cause undesired operation.

Warning!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.